AUGUST 1957 • 40 CENTS

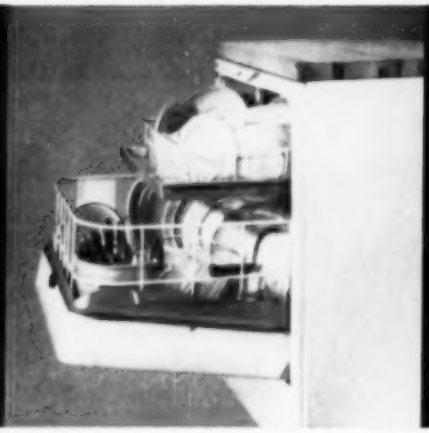
Consumer BULLETIN

Published by
Consumers' Research, Inc.
Washington, New Jersey

THE ORIGINAL CONSUMER INFORMATION MAGAZINE

DISHWASHERS

How the various machines compare in washing and in convenience 6



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A counter service restaurant (Van de Kamp's Plaza Coffee Shop in Los Angeles) well arranged for cleanliness, covering of foods, and a full view of the kitchen operations by patrons.

Restaurants should be clean!

Look around, before you order

THOUGH EVERYONE HAS THE RIGHT to fresh, bacteriologically clean, and unadulterated food, this ideal is at present far from realization. The British Medical Journal in an editorial a few years ago reported that there were over 6000 cases of food poisoning "notified" in England in the previous year, and no doubt a great many more went unrecorded. A Canadian doctor notes that he was once served in a popular restaurant a salad garnished with rat excrement. Aside from the disgusting aspects of an instance of this kind, food so contaminated may cause serious food poisoning or spread such diseases as viral hepatitis.

In the same restaurant a young employee was seen putting beautifully polished silverware into containers. He was handling the knives by the blades, the spoons by the bowls, and the forks by the tines. The young man was asked why he did not pick up the silverware by the handles. His reply, illustrative of the lack of knowledge of the most elementary questions of sanitation, was "My hands are clean." How could they be clean when his fingernails were black with dirt, and he coughed into his hand?

In a good restaurant, service people do not place their fingers in glasses or cups as they carry them, and they keep foods properly covered against dust, dirt, and flies.

The manager of an eating establishment should ideally have an elementary knowledge of both chemistry and bacteriology. The person supervising operations in the kitchen should be one of quick perception and good judgment and should be taught to recognize the hazards which come from use and handling of the utensils by persons who may be slovenly, dirty in their habits, diseased, or carriers of disease. But far too often uninformed and completely untrained persons are relegated to the work in the kitchen. Food is handled, and often thumbprinted as well, by rule of thumb.

In one restaurant, food was carelessly stored. Rats, mice, and cockroaches ran over it and contaminated it. The result was an outbreak of salmonella food poisoning. It was not a case of a poison in the food but rather of the food acting as a carrier of infection. Some of the customers died as a result of the slovenly housekeeping.

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The Consumers' Observation Post

IN AN EFFORT TO ELIMINATE TRACES OF ANTIBIOTICS from the nation's milk supply, the Food and Drug Administration has issued restrictions on dosages of these drugs for cattle. Three nation-wide surveys of fluid milk have shown the presence of antibiotics in milk in nearly every state in the Union. Although some experts take the position that no serious health problem is involved, the possibility of allergic reaction in persons sensitive to antibiotics, or the development of sensitivity so that antibiotics could not be subsequently used in treating some serious illness, make it imperative to eliminate these potent drugs from the food supply.

* * *

COATS MADE OF THE NEW PILE FABRICS of Orlon-Dynel or Orlon alone are now making their appearance in the stores. They are light in weight, attractive in appearance, and much less expensive than fur coats. It is well to remember, however, that special dry-cleaning methods are required in handling them after they have become soiled. The National Institute of Drycleaning has tested a number of coats made from the 100% Orlon-pile fabrics. It has received a number of complaints of shrinking and tufting of cloth coats lined with an Orlon-pile liner after they have been cleaned and finished. Tufting of some of these fur-type pile fabrics begins during wear and cannot be removed by any presently known method of dry cleaning. It will be well for women who purchase coats of the new pile fabrics to keep in mind the possibility that some of the coats will retain their attractive appearance only for one season's wearing at most.

* * *

HOMEMAKERS EVERYWHERE HAVE DIFFICULTIES IN THE SERVICING of their appliances. A Consumers Counsel in Karlsruhe, Germany, reports many complaints of housewives because repairmen do not show up on time and charge 40 to 60 percent more than their estimates; the workmen do not make small repairs willingly and indicate a preference for major installations; after they finish a job, they do not clean up the mess they make. It sounds familiar, doesn't it?

* * *

CONTAMINATION OF THE AIR in large cities from tetraethyl lead in the exhaust gases of motor vehicles may be a serious problem. Investigations of the air of some cities of Switzerland showed that the lead content at some points was five to seven micrograms per cubic meter. These figures, according to an abstract from the Bulletin of Hygiene in Industrial Hygiene Digest, are not high as compared to some of those found in large cities in the United States, but even so, some European authorities feel that the addition of lead tetraethyl to gasoline should be discontinued since studies have shown that the lead content of the blood of persons tested is increasing year by year. Dr. Norman Hilberry, director of the Argonne National Laboratory has warned that tetraethyl lead from auto exhausts may be a greater cause for concern than the fall-out from nuclear bomb testing in the U.S.

* * *

DATING PRODUCTS to insure the consumer of freshness for milk and prepackaged meats may be extended to other fields. This past spring there was a measure under consideration by a special committee of the Pennsylvania State Legislature that would make it illegal to sell any gas, electric, or mechanically-operated home appliance without adequate identification of the name of the manufacturer, the model of the appliance, and the year it was manufactured. That would certainly be a convenience to the consumer when he is trying to secure a replacement part providing, of course, such information were placed in a spot that could be readily seen without taking off a panel or pulling out a fixed appliance from the wall to look at a hidden name plate or marker.

MAJOR HOUSECLEANING should be done in instalments and women should try to take it easier in doing their household chores if they want to avoid arthritis. That warning comes from the Arthritis and Rheumatism Foundation which reports that rheumatoid arthritis, the most severe and crippling form of the disease, affects three times as many women as men. The case histories of women crippled by the disease show long hours of hard work with little rest or relaxation. Although there is no cure for arthritis, the Foundation reports that the effects can be mitigated by getting as much rest as possible, avoiding tensions, eating adequately without becoming overweight, and guarding against cold, dampness, and sudden chills.

* * *

CAN TAXES BE USED TO REDUCE THE LENGTH of automobiles in order to make more efficient use of street and parking space available in crowded city areas? C. Lowell Harriss, associate professor of economics at Columbia University, points out that if the average new auto were only a foot shorter, assuming that 4 million a year are destined for city use, about 800 miles of street space would be released. He suggests that a tax method worth considering is the basing of annual license charges on auto length or on length and width combined. The annual fee, for example, might be $1 for each inch of length between 180 and 185 inches; $3 per inch between 185 and 190 inches; and up to $10 per inch of length exceeding 195 inches. He admits, however, that the system would be fully successful only if it induced auto manufacturers to produce shorter cars. The increase in parking space available would thus be achieved without any burden on taxes to provide additional facilities, much needed at the present time.

* * *

FARMERS WILL NEED TO MAKE RAPID PROGRESS in developing a lean-meat type hog if pork is to win back its former popularity in the market. That advice comes from the University of Missouri which points out in one of its agricultural publications that American shoppers shun heavy fats to avoid the hazards of overweight and subsequent heart and vascular ailments. Farmers are urged to move more rapidly in raising the lean-meat animals required by insistent consumer demand. Not only pork but beef will also need to be leaner since consumers are showing more and more aversion to fat meat of any kind, according to Dr. Lowell Walters of Oklahoma A. and M. College. The lower grades of meat have been given high ratings in consumer preference tests because of their lower fat content.

* * *

CASHMERE IS CURRENTLY FASHIONABLE for sweaters, coats, dresses, and other garments, both for men and women. It is a natural fiber obtained from the fine undercoat of the Kashmir goat chiefly found in the high plateaus of inner Asia, although a small amount comes from Kashmir, India. The National Institute of Drycleaning points out in a recent release that the word "cashmere" is often used indiscriminately, and many products so labeled actually contain little or no cashmere fiber at all. The label of any fabric that is a blend of cashmere and other fibers should indicate the percentage of each fiber. The N.I.D. reports that cashmere fabrics are very susceptible to abrasion in wear at the neckline and other edges, such as the front opening, and at the edge of pockets. Pilling is much more noticeable in knitted cashmere garments than in woven goods and occurs most frequently in the underarm area where the sleeve rubs against the body. Cashmere garments are considered "luxury" garments and require special handling in dry cleaning.

* * *

THE PRICE OF WOOL CLOTH has increased 10 to 15 cents a yard. That means about $2 to $2.50 more for a medium-priced man's suit next spring, warns The Wall Street Journal. Topcoats and sport jackets will also be higher. Probably the change will not affect prices of fall suits; but next spring the $50 to $60 price range will be higher.

(The continuation of this section is on page 33)

Consumer Bulletin

THE ORIGINAL CONSUMER INFORMATION MAGAZINE

VOL. 40, NO. 2 CONTENTS AUGUST 1957

OFF THE EDITOR'S CHEST

As BOTH CHILDREN AND HOUSEHOLD CHEMICALS continue to increase in number, it is becoming quite obvious that something must be done to keep the two in proper relationship to each other. The ever-increasing number of new chemical substances, drugs, and household preparations that find their way into the home have been held in part responsible for the substantial rise in accidental chemical poisonings in recent years. Six hundred to a thousand deaths from accidental poisoning occur annually, mostly young children. The total number injured or harmed is one to two hundred thousand and exceeds the effect of any of the childhood diseases.

It is quite understandable, therefore, that there is a strong feeling that something must be done about labeling household chemicals in order to put parents on guard against allowing children to come in contact with certain familiar household products. A particular item may be safe in the hands of the adult user, but it may cause illness or even death to the child who inhales or drinks it. Several states have laws or rulings regarding warning labels. In a case in Virginia, for example, the State Supreme Court held that the manufacturer is

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Rotary, reel, or "hammer-knife" mower—which type should you buy?

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Subscription price (12 issues), $4 per year, U.S.A. (Canada and foreign, $4.20). Single copy, 40c. For libraries, schools, and colleges, a special subscription of nine monthly Bulletins (October-June, inclusive) is available at $3; Canada and foreign, $3.20.

When changing address, give the old address as well as the new, with postal zone number if any. Allow five weeks for the change to become effective.
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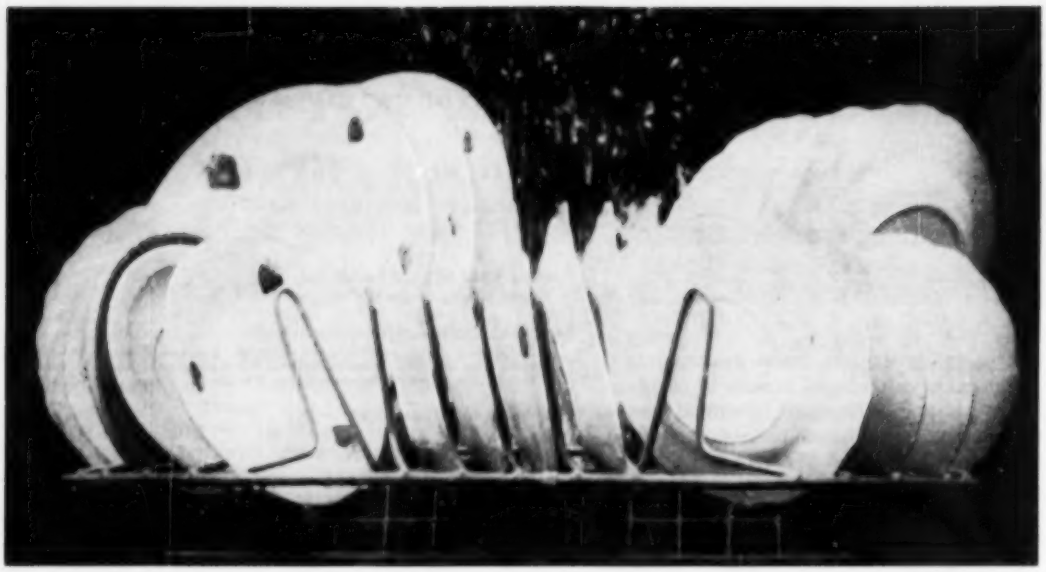
Listings usually are arranged in alphabetical order by brand name (not in order of merit) under each quality or performance rating. A numeral 1, 2, or 3 at the end of a listing indicates relative price, 1 being low, 3 high. Where the 1, 2, 3 price ratings are given, brands in the 1, or least expensive group, are listed alphabetically, followed by brands in price group 2, also in alphabetical order, etc. A quality judgment is wholly independent of price.

Entered as second-class matter, November 9, 1934, at the Post Office at Washington, N. J., under the Act of March 3, 1879; additional entry at Easton, Pa. Printed in U.S.A.



Automatic dishwashing machines

Before you make up your mind to buy—consider:

The machines are list-priced at something in the neighborhood of $300 to $400, plus installation charges.

You will need ample *hot* water—at 140° or higher—with water pressure no lower than 30 pounds per square inch.

Do not expect the dishes and glasses, etc., to be washed as clean as a very particular housewife would wash them by hand.

Be prepared to wash by hand those pieces not washed in the machine, such as pots and pans, occasional pieces of tableware, and other pieces which need rubbing or "elbow grease" to remove particles of food.

You will be wise to select a dishwasher from among those found in CR's tests to wash best; the differences between the machines in that respect were real and important. But don't buy any machine of a make for which you cannot be sure to get good and prompt servicing and parts in your community or at a convenient distance.

THERE ARE MANY THINGS to take into consideration in buying an automatic dishwasher for the home. It is a relatively simple appliance compared to an automatic combination clothes washer and dryer—but costs almost as much. Evaluating the factors that are peculiar to your own household needs may get you a more satisfactory appliance and a better return on your investment.

First of all, the prospective buyer must decide on the capacity of the dishwasher. Some dishwashers are of limited capacity, and though a small machine might be quite satisfactory for a small family, it would often be inadequate for a larger one or for use in a home in which entertaining is frequent rather than exceptional.

Consider also whether an under-counter, free-standing, or portable model will serve best. Built-in models of dishwashers, whether they are under-counter or free-standing models, will require a substantial outlay for the installation of the water connection and drain. The built-in machines offer the owner greater convenience, as the portable models require space for storage while not in use and are normally moved into position each time they are used and back again. With the portable, the homemaker must fasten the water inlet hose to the hot-water faucet each time and place the drain hose in the sink. With a single sink, it will then be difficult for the homemaker to clean up the kitchen, since during the period the machine is operating both the hot-water faucet and the sink are in use for

the dishwasher. In every household, too, accidents will happen. If the hose connection to the hot-water faucet is not firm and secure, hot water may be sprayed about the surrounding cabinets, work tops, and other areas, thus creating an additional clean-up job. Sometimes the drain hose is not properly placed by the user; as a result the water that is pumped from the machine may splash about the room. Relatively few portable machines are bought. In so far as popularity is concerned, it was reported that, in the Chicago area, only 19 percent of the dishwashers purchased were of the portable type.

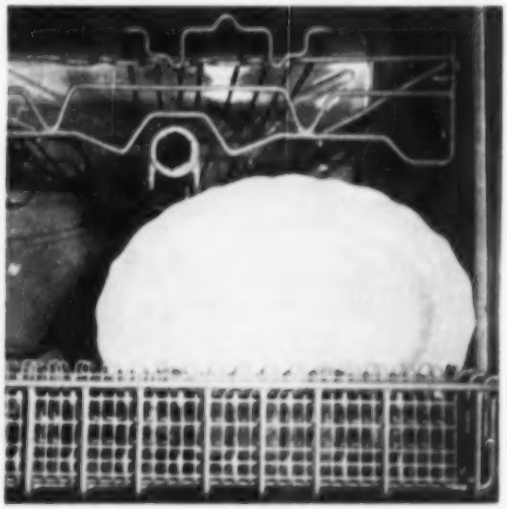
How is the dishwasher loaded? Some machines are loaded from an opening in the top and others are loaded from the front. Some are so designed that it is not necessary to load the bottom rack before filling the top rack. This would seem to be the more convenient design. On the other hand, it does not take long for a woman to become expert in loading a dishwasher once she has an opportunity to use it day in and day out for several weeks.

It is difficult to evaluate the relative washing ability of a machine in the home. The machines tested by Consumers' Research under controlled conditions showed marked differences in their ability to clean dishes and silverware. All dishwashing machines have certain limitations that should be recognized at the outset. Odd-sized and odd-shaped dishes are usually difficult to fit into the racks of dishwashers which are designed, naturally enough, to accommodate the plates, cups, glasses, and table flatware that are used most frequently in the home. You cannot wash coffee pots successfully, for example, and it may be just as well not to wash articles made of plastic that will not withstand the heat, ornamental dishes, or pots or pans that have plastic or wooden handles or trimmings. Some automatic dishwashers do not take such items as long-stemmed goblets.

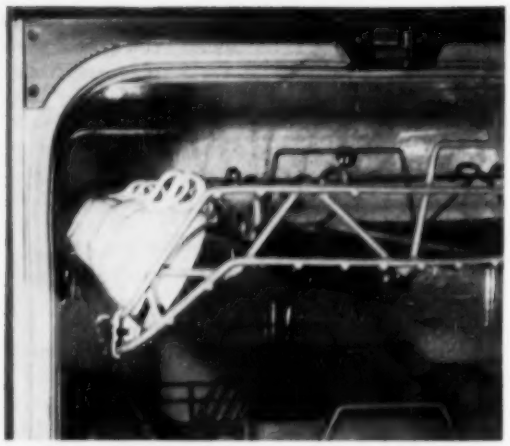
All dishwashers are at a decided disadvantage in cleaning pieces that have residual bits of sticky food, such as gravy or food sauces, or food that has stuck or been burned on. The dishwasher, however, can save a good deal of work with pots and pans because even with such articles it may greatly reduce the difficulty of the job that remains. The grease, for example, will have been disposed of. Washing can sometimes be improved by placing and facing the pieces in the most advantageous positions in the rack. This is soon learned by trial and error.

There are a number of factors other than the design of the dishwashing appliance itself that will affect its operation. A dishwasher cannot, for example, perform at its best where water is very hard. In such homes, means should be provided for softening the water. Otherwise there will be spotting of dishes and glassware and the resulting film may be so pronounced that the performance of the dishwasher will be considered unsatisfactory.

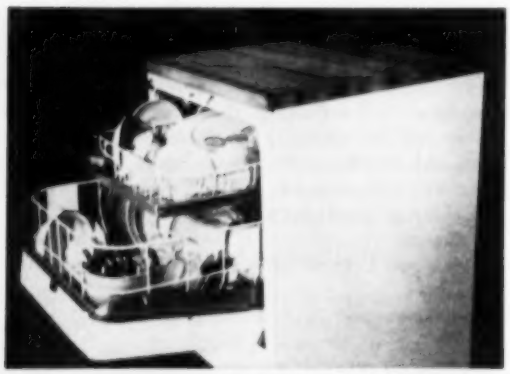
Experts recommend a water temperature of *at least* 140°F, preferably 150 degrees for washing



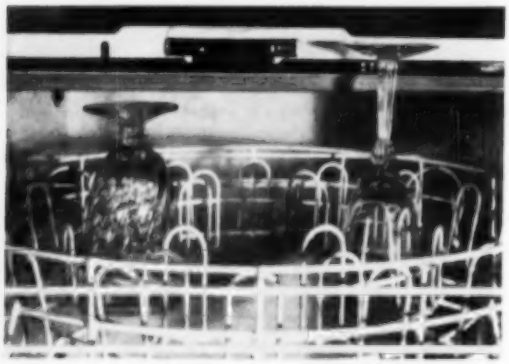
Left: The large platter interfered with the operation of the water sprayer, shown at the arrow, on the Youngstown. Right: On the Frigidaire, a guard around the water sprayer prevents the platter shown from interfering with the effective operation of the sprayer.



On the Youngstown, unless great care is used each time the upper rack is pulled out, there is danger that one or more cups will fall to the floor and be broken, because of the angle at which the cups are held and the lack of a guard to prevent their falling.



Dishwashers, like the Hotpoint, which permit the lower and upper racks to slide outward as shown above are easier to load than the type which requires that dishes be loaded from the top through the upper rack.



While the Kelvinator will take the short-stemmed goblet, it will not hold the one with the long stem.

and 170 degrees for rinsing in order to insure proper cleansing to deal with bacteria. It is not advisable, however, to try to maintain the temperature of the home water supply much above 140 degrees because of the more rapid depreciation of pipes and tanks and possible failures in the water system, and the risk of someone's being scalded. Although 170-degree water temperature is recommended for bacteriological cleansing, in only two machines did the air reach this temperature, and then only in the vicinity of the lower racks during the drying period. The maximum temperatures reached during the wash and rinse cycles of all the machines tested ranged from 100 to 140 degrees with an average temperature around 125 degrees—considerably below the temperature recommended for efficient dishwashing—even though water at a temperature of 150 degrees was supplied to all machines. It is evident that the temperatures within the machines are not, for the most part, high enough to live up to the expectations of the homemaker that she will achieve thorough cleansing of dishes from a bacteriological standpoint. In a few instances, the cleansing would not be as thorough in this sense as would be assured by ordinary careful dishwashing and hot-water rinsing by hand.

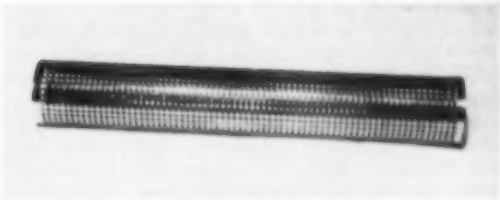
For best results, water pressure should not be less than 30 pounds per square inch. CR found that, when the water pressure was below 30 pounds, the amount of water supplied to the machines was decreased sufficiently to reduce washing effectiveness. This was true even on dishwashers that were equipped with hot-water inlet control valves which are intended to regulate the flow of water at a constant rate whether the water pressure is 20 or 100 pounds per square inch.

Most manufacturers of dishwashers advise the use of detergents specially formulated for use in this kind of appliance. Spots and stains on glasses and dishes are likely to occur if the right detergent is not used. *Cascade*, *Finish*, and *Thanx* are three that are formulated to avoid excessive spotting. Such detergents have their disadvantages and should be used with discretion because of their strong action and the possibility of causing corrosion. Difficulties are particularly likely to arise with earthenware, dishes that have underglaze decorations, stainless-steel ware, and aluminum. One manufacturer of silver tableware recommends that silverware washed in an automatic dishwasher should be removed at the conclusion of the cycle and dried immediately. With some types of water supply, silver which is allowed to remain in the dishwasher may develop a cloudy film.

A sales point often used for dishwashers is that it is not necessary to rinse the dishes or the tableware, either silver or stainless steel, and that it is feasible to wash all the utensils for three meals at one time. This is possible but not always practicable, since certain foods left on silver or stainless-steel flatware for several hours may stain or corrode it.

CR is not able to report that any dishwasher is entirely satisfactory. While some of the dishwashers tested in this study washed dishes and glasses satisfactorily enough, none gave the results one can secure by hand washing with a cloth or sponge. Table flatware was a particular problem. Many of the pieces washed in the dishwasher were not quite clean and had to be rinsed off or washed over by hand. The tests were severe, and there is no doubt that for some families dishwashers would be entirely practical and very convenient. A dishwasher may be a boon for the housewife who has another job outside the home. The hostess who entertains extensively, as well as the mother of a large family, will find it useful, too.

For the convenience of readers, the estimated cost of operation per month for each dishwasher is given in the accompanying table; the figure is based on use of the machine three times a day with electricity at 3½ cents per kilowatt-hour.



The relatively small size of the holes of the above strainer, used on the Youngstown, will make it necessary to clean the strainer frequently, perhaps as often as the dishwasher is used. Cleaning of the strainer can be troublesome, especially if it is allowed to become dry first.

A. Recommended

Frigidaire, Model DWUW (Frigidaire, Div. of General Motors Corp., Dayton 1, Ohio) $320. A front-opening front-loading under-counter model. Performance in washing dishes and tableware was fairly good, but best washing results depend upon careful placement of dishes. Strainer required frequent cleaning because it passed only relatively small food particles. Careful preliminary scraping or rinsing of dishes helped with this problem. Machine was easy to load.

Hotpoint, Model MCP27 (Hotpoint Co., Chicago 44) $370. A front-opening front-loading portable machine for mounting on casters or as a free-standing model. Machine washed dishes fairly well, but showed poor performance on tableware. Loading of large pieces such as platters, etc., somewhat difficult.

Hotpoint, Model MCP28 (Hotpoint Co.) $340. A front-opening front-loading under-counter model for permanent installation. The interior and the operation of this model are the same as for the portable model. Comments on performance under *MCP27* apply to this machine.

B. Intermediate

General Electric, Model SU-60P (General Electric Co., Louisville 1, Ky.) $300. A drawer-type top-loading under-counter model. Performance in washing dishes and tableware was fair. Control dial action and markings were such that it was difficult to set the ma

Brand	Capacity—service for	Dimensions, inches		No. of pieces machine will hold*		Time for complete cycle, min.	Electricity		Hot water, gallons	Approximate maximum temperature, degrees	
		width	depth	lower rack	upper rack		watt-hr. per cycle	cost per month, $		lower rack	upper rack
Frigidaire DWUW	6	24	24	31	20	45	580	1.85	11.6	140	135
General Electric SU-60P	6	24	25	29	21	37	630	2.00	10.6	140	140
Hotpoint MCP28	6	24	25	27	29**	53	835	2.60	10.7	160	130
Hotpoint MCP27 Portable	6	24	25	27	29**	53	655	2.05	10.2	170	135
James 9900 Portable	6	25	18	28	22	14‡	145	0.45	6.0	140	140
Kelvinator UDW-P	6	24	23	26	29	34	625	2.00	6.6	160	160
Westinghouse DWDA-24	6	24	24	29	26	80†	1220	3.85	7.8	170	160
Youngstown DW300	8	30	24	43	24	36	605	1.90	7.2	145	135

* Except for the *James* and *Youngstown*, this figure includes two small pans. No pans are included in figures for the *James*, and three small pans are included for the *Youngstown*.
** Upper rack designed apparently primarily for cups and glasses.
† Average time with incoming water temperature at 150 degrees. Time will vary with temperature of hot water supplied; decrease in temperature increases time required and vice versa.
‡ Time to end of wash cycle; machine is not equipped with a heater for the drying operation.

chine to desired parts of the cycle. Loading of upper rack, somewhat difficult in spite of greater flexibility offered in the design of the rack, and instruction book was not very helpful in this respect. Machine was somewhat noisy in operation. This machine with the "Rinse-Dry" ejector—for adding a liquid wetting agent in the final rinse—would be *C. Not Recommended*; with the ejector there was excessive electrical leakage current on the sample tested, indicating a substantial degree of shock hazard. Of the two samples tested, washing results were fairly good on one and only fair on the other. The difference was found in the two impellers (fan-blade-like devices at the bottoms of the tubs) which were identical except in the "leading" edges. The impeller having sharp leading edges washed better than the one with somewhat blunt leading edges. Machines which have the preferred impeller and no "Rinse-Dry" ejector warrant an *A-Recommended* rating.

Kelvinator, Model UDW-P (American Motors Corp., Detroit 32) $320. A front-opening front-loading under-counter model. Performance in washing dishes and tableware was fair. Relatively noisy in operation.

Westinghouse, Model DWDA-24 (Westinghouse Electric Corp., Columbus 16, Ohio) $300. A drawer-type top-loading under-counter model. Performance in washing dishes was fair; on tableware, fairly good.

• • •

James Universal, Model 9900 (Cribben & Sexton Co., Universal Gas Appliances, Chicago 12) $280. Top-opening top-loading portable model. Performance in washing dishes and tableware, relatively poor. The machine was somewhat difficult to load. Cleaning the strainer was difficult and inconvenient. The *James* was noisy in operation. Information in the instruction book was not well presented.

Youngstown, Model DW300 (Youngstown Kitchens, Div. of American-Standard, Warren, Ohio) $300. A front-opening front-loading under-counter model. Dish-washing action, relatively poor; a considerable amount of food was left on dishes and racks, particularly where dishes made contact with racks; performance in washing tableware, fair. Design of upper rack for holding cups considered poor because of tendency for cups to fall off upon slight jarring of the rack. Strainer required frequent cleaning because it passed only relatively small food particles. Careful preliminary scraping or rinsing of dishes helped deal with this problem. Strainer was difficult to remove and clean.

Labels on food packages

WE ARE COLLECTING some interesting material on labels and what they reveal and do not reveal about the ingredients of foods and beverages. We shall be grateful to readers who will send in labels of food packages in which some substances are named that may strike you as hardly proper for use in food products, also labels which seem to have omitted important information, or in which by choice of color of ink, background color, style and size of type, or for other reasons the wording is hard or well nigh impossible to read.

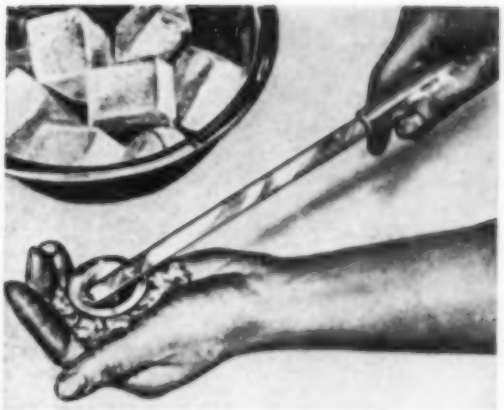
In sending in the package labels, please be sure that the name of the product and the name and address of the manufacturer appear in each instance, when these are given on the package anywhere.

Those "patent-medicine" water conditioners

AN INTERESTING and useful book on problems of farm water supply and sewerage is entitled Rural Water Supply and Sanitation, by Forrest B. Wright, Ph.D. (Professor of Agricultural Engineering, New York State College of Agriculture, Cornel University, Ithaca, N.Y.; John Wiley & Sons, Inc., publisher). This book deals with most of the problems that would concern the farmer or person living or vacationing in the country who must provide his own water supply from a spring, well, cistern, stream, or reservoir.

With the kind permission of the author and publisher, we are quoting the following from Dr. Wright's book:

> *Warning:* A number of so-called "water conditioners" have recently been placed on the market which the manufacturers claim will do almost anything from preventing lime deposits to growing better irrigated crops. Like most cure-alls, these devices are of little or no value for any purpose and therefore should be avoided.



Tap Icer

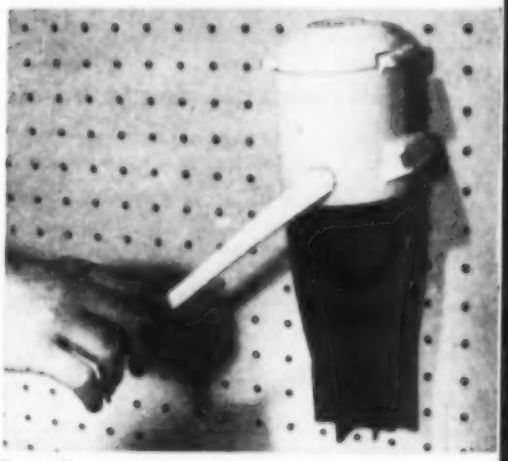
Crushed ice at a price

ICE CUBES are wonderful, but sometimes you would like to have finely crushed ice or at least ice in small pieces that can be poured into the neck of a vacuum bottle that you plan to take along on a picnic, or even to pack around foods in the picnic carrier.

If you need just a little cracked ice, and only now and then, the *Tap-Icer* may do for you. It is essentially a convex aluminum disk about 1½ inches in diameter, fastened to a spring steel strip. The rounded portion of the aluminum disk is struck against a cube of ice held in the palm of the hand. It is surprisingly effective. It sells at $1 each or three for $2.75.

Wall-mounted ice-grinders are available at various prices and in different finishes. There are enameled ones and elegant chrome-plated ones, and crushers in color to match kitchen decorating schemes. On the *Dazey* shown, the bar on the right side is adjusted to provide fine, medium, or coarse crushed ice. The price is $10 and up for this wall model, *No. 160*. It uses the same wall bracket as other *Dazey* appliances, such as the *Dazey* can opener. This ice crusher performed well in CR's studies. *Dazey* portable crushers, similar to the wall type, are also available at about the same price.

Need a lot of ice in a hurry? Then an electric crusher may be your choice. The *Ice Jet* shown sells at $17 and is an attachment to the well-known *Waring Blendor* ($45). It will grind four trays of ice cubes in a minute and a half, about as fast as the cubes can be fed into the machine. Like the wall-type ice-breaker, the *Ice Jet* on the *Waring* makes a lot of noise but it does let you know that cool drinks are coming.



Dazey 160

Ice Jet attachment of the Waring Blendor

Example of a well arranged kitchen in full sight of patrons in the restaurant seen at the right. This is one of the restaurants of the Stix, Baer & Fuller department store in St. Louis.

Restaurants should be clean!

(*Continued from page 2*)

In another instance, a cook, who was a diphtheria carrier, caused a local outbreak of diphtheria because she got her thumb in the pasteurized milk when she opened the top. Evaporated milk also should be cleanly handled. There is danger in its use when, for example, the can top is punched with a dirty knife and then put in a warm place (or in a cooler place for a longer time).

It must be emphasized that there are several diseases that may be spread by careless and uncleanly habits. It is surprising how many people *never* wash their hands after visiting the toilet. It will take a lot of education by restaurant owners and supervisors of food handlers to cause *all* of them to wash their hands thoroughly with soap and hot water. After a certain age adults may be uneducable in this respect, but the schools could do a great deal to help in the education of the children along these lines. Cards reminding people of this simple but vitally and necessary precaution should be put up in all schools, and needless to say, in the toilets of all restaurants and commercial eating places.

Contaminated fingers may bring about the spread of bacillary and amebic dysentery, cholera, and the minor disorder of pin worms. Secretions from the nose and throat which get on the fingers may be the cause of the spread of sore throat, tonsillitis, diphtheria, tuberculosis, and other respiratory diseases.

Needless to say, *all* food handlers and emphatically those with any suspicion of disease should be properly evaluated by public health authorities. All should be X-rayed to detect any serious lung disease.

Insects, such as the common fly, the ant, and the cockroach, are important sources of food contamination. Anyone who observes the habits of flies is disgusted when he sees a dining room or kitchen swarming with them and when he sees them crawling over food. Yet such conditions are often observed at hotels, tourist resorts, and wayside lunchrooms. Flies are not alone disgusting; they may spread typhoid fever, dysentery, and possibly infantile paralysis.

A new danger in restaurant kitchens and food storage space exists in the casual and thoughtless use of insecticides by spraying and by vaporizers (a new and popular method of disseminating strongly toxic insecticides, such as lindane, in restaurants, food stores, and butcher shops). The average restaurant operator will be completely uninformed upon the dangers of spraying (or vaporizing) toxic substances, such as DDT and chlordan, in a place where food is stored, prepared, and cooked. The Division of Environmental Sanitation of the New Jersey Department of Health recognized this danger by its disapproval "of the use of insecticides in food establishments unless all food and surfaces on which food is prepared or stored are adequately protected from the vapor, smoke, fog, or solids given off by insecticide-dispensing devices, whether automatic or hand controlled. Further, all food preparation surfaces, utensils and equipment must be thoroughly washed and cleaned after exposure to such insecticides and before any food shall contact these surfaces."

Consumers are therefore justified in objecting to the use of insect-killing vaporizers in restaurants, food stores, and butcher shops unless the foods and surfaces which come into contact with food are covered while the gadget—usually mounted on the wall and connected to the power system with a lamp cord—is in operation. From the consumer's standpoint it would be better that DDT and mixed insecticides containing it should never be used in food preparation and serving areas, for few restaurant operators are sensitive to the dangers of insect poisons or will see to it that their help takes all necessary precautions in their use at all times.

Dishwashing is a far more important procedure than most people, particularly restaurant operators, commonly realize. If it is improperly or incompletely done, disease germs may, instead of being removed, be more widely distributed. All too commonly the dishes are thrown into

hot water, fished out, and wiped without even being rinsed in clean water, let alone water hot enough to sterilize them. Dish wiping, especially if done with a dirty towel and unwashed hands, merely adds to and further distributes bacteria. If the dishes are now stored where flies, cockroaches, and mice run over them, and if the flatware is dumped higgledy-piggledy in a drawer or piled on a restaurant counter, and further contaminated by handling by the wrong ends, it is evident that such tableware is far from being bacteriologically clean, no matter how it may look to the naked eye. In many a restaurant, flatware may be dropped, picked up, and put on the table without so much as a wipe, let alone washing. Dishes and flatware should be sterilized, and, when sterile, should not be coughed over or sneezed over. Storage should be on *clean shelves* with flatware in individual compartments, and all who handle it should pick it up by the handles, not by the parts that are put in the mouth. Any knife, fork, or spoon which is dropped should be rewashed and resterilized. The British Medical Journal mentioned that proper cleansing efforts in restaurant dishwashing are very important and that bacteriological investigations showed that when a cleansing agent containing hypochlorite and a detergent was used, the sanitary condition of the utensils was very good; with washing by the ordinary method with "soda" (apparently meaning washing soda), bacterial counts per utensil were high.

Great emphasis should be given to the importance of rinsing in high-temperature water after washing, and drying in a hot plate container without wiping. It is made evident that restaurant dishwashing should be done with a detergent specially compounded for dishwashing, rather than with soap, and rinsing should be at a temperature high enough to sterilize (170-180°F).

A later editorial in the same medical journal suggests as important provisions to assure proper sanitary conditions in restaurant kitchens, the furnishing of a sufficient supply of clean water, both hot and cold, with separate sinks for washing foodstuffs, for washing dishes and utensils, and for washing hands; separate towels for each employee; prohibition of smoking while food is being handled; exclusion of dogs and cats from kitchens and food-storage space.

Quite likely some of the precautions here suggested will not be taken by the average restaurant owner; nevertheless, the point of view expressed is an important one that should be given close consideration by state and city health officials, for better sanitation is needed in a large proportion of the places where food is prepared for public consumption.

Visitors' impressions of many a town have been determined by the way the food in its restaurants has been prepared and served, and accordingly the business interests and public officials of a city have good reason to be concerned about restaurants that do not take proper care of their food and utensils. They should bear in mind that one eating place may give a whole town or district a bad name, because most persons tend to generalize from single pieces of evidence. It is decidedly worth while, therefore, for service clubs, chambers of commerce, and the town or city government officials having jurisdiction to take a continuous and lively interest in this problem in order that visitors and travelers may not give the restaurant business of the whole town a black eye because they have seen careless or disgusting handling or contamination of food or dishes in some particular eating place.

The kitchen should be a show place where guests are welcome, where they are pleased to observe the cleanliness, order, and sterile technique observed throughout. One earmark of a good restaurant is that the proprietor has no objection to visitors' seeing the kitchen. In fact, in some of the best restaurants, the kitchen is deliberately arranged so that all parts of it can be seen from the dining room through an open door or wide serving window by anyone who wishes to concern himself with conditions therein, and in many cases, only an observing glance will be required to distinguish the good restaurant from the undesirable one.

Unfortunately, it is all too true that there are proprietors of eating places who are by no means blind but "just don't give a damn!" On the other hand, hotel, tavern, and restaurant operators should realize that a good many among those they would like to have as patrons are not lacking in ability to note and remember slipshod and insanitary conditions in preparation and serving of foods.

Acknowledgments

The following is a list of credits for pictures supplied by outside sources.

Cover—Motorola Inc.
Pages 2 and 12—National Restaurant Association
Page 11—Tap-Icer Co.
Page 14—United Press Photo for Empire State Building Corp.
Page 18—Hornstein Photo Sales, Chicago

Protecting the home against lightning

THERE IS AN OLD SAYING that lightning never strikes twice in the same spot. Of course, this is not strictly true. The Empire State Building, for example, has been hit 50 times in a single summer, but is not damaged because it is properly protected against such lightning strokes.

There are approximately 400 deaths per year from lightning, and the number injured is estimated at 1000 a year.

Not every home is in danger of being struck by lightning. Generally, buildings in metropolitan areas where there are tall steel buildings near by will be spared.

Lightning itself is in effect the breakdown of a gigantic capacitor. Electrical charges in summer thunderstorms often accumulate to large quantities and develop potential differences (high voltage) between the base of the clouds and the earth. The base of the clouds contains large quantities of negative electrical charges, and these cause the accumulation of corresponding positive charges on the earth surface beneath the clouds; thus, the clouds and the earth form a huge charged capacitor with the air between acting as the dielectric or insulator. When the potential between the clouds and the earth becomes great enough to break down the insulating characteristic of the air, the air is punctured. The resulting rush of electricity between the earth and the clouds is what we call lightning. The positive charges in the earth tend to concentrate on upwardly projecting objects on the earth beneath the base of the cloud. Such objects include trees, buildings, poles, and steeples.

A lightning rod on an exposed building will take the place of one of these projecting objects, and the concentration of positive charges on the rod will help initiate the stroke of lightning. The resulting very high flow of current (thousands of amperes) in the stroke will pass to the lightning rod and then to ground, leaving the building undamaged.

Lightning rods properly installed can provide good protection against damage by lightning. Ground conductors should be of sufficient size to carry the large amounts of current and above all must be securely and permanently grounded. A lightning rod can become a hazard instead of a protection if the ground wires are poorly installed or carelessly allowed to get loose from the rod which is buried in the earth. If this should happen, the stroke after striking the rod is likely to jump to some easier path to ground (such as the building) and may do a great deal of needless damage on the way.

The number and location of grounds for lightning rods is important. In general, there should not be less than two, and they should be spaced as far apart as practicable, and where there are more than two they should be roughly at equal distances from each other. Wherever possible, there should be connections also to underground water pipes. A connection to water piping where it enters a building generally constitutes the best ground available, especially if the water system is large as in a city or community water-supply system. It is perhaps better not to use the piping of an individual private water-supply system (with an electric pump) as a ground for lightning protection systems.

Outdoor television antennas should have their masts securely grounded by a heavy wire. Lead-in wires should be protected by the use of a lightning arrester listed by the Underwriters' Laboratories.

No lightning-protection system should be even considered, much less installed, unless it is listed by the Underwriters' Laboratories.

Automobile radios

WHAT'S THE DIFFERENCE between the $40 radio the purchaser can install for himself and the $135 factory-installed model? Ninety-five dollars, if you are speaking of price, but if you are willing to forego a touch-tuning control and instead use two fingers to turn a knob, the other chief differences between the two types of automobile radio sets may not be at all important to you. It is worth noting, however, that some hold that push-button control of an auto radio is safer than turning knobs. There are indications that a driver's attention may be diverted from the road for too long a time when he is turning the knob to tune in a station. This diversion of attention while tuning, it has been said, has been the cause of accidents.

It is perhaps in order to point out a number of reasons why the car owner may want to choose the more expensive model specially built to fit his car.

About 10 years ago, two developments were announced which are now finding their way into current automobile radio production. The first was an automatic mechanism for tuning an automobile radio by merely pushing a button. With one present variation, tuning is controlled by a foot or a dash control button, and means are provided by which the set itself will select only strong stations, or strong and weak stations, at will. This station-hunting design is a convenience to the driver, but like so many other modern conveniences, costly (about $30 extra), complicated, and thus highly subject to getting out of order. Indeed, any complex addition to the electrical circuitry and mechanical functioning of a radio, or any appliance for that matter, can only increase the likelihood of need for service and the cost of keeping the set in operating condition. The best design from the maintenance standpoint is always the simplest.

The second development—transistors—makes possible several improvements in automobile radio performance and reliability. Of primary importance is the fact that the vibrator and associated power supply circuit components are eliminated and any serviceman will tell you that between 60 and 80 percent of the servicing required by automobile radios is concerned with these parts. And, even though only one transistor may be used (for power output to the speaker), the current drain from the battery will be substantially less than that of a comparable all-tube radio. Thus you don't have to be as much concerned about using your car radio when your battery is low or when you are parked. Transistors, however, do have some disadvantages. Even moderately high temperature, for example, such as would be attained in a parked car on a hot summer day may ruin them.

Because of the saving by elimination of the vibrator and other power-supply parts when transistors are used, the average 12-volt car radio with special, newly-designed, 12-volt tubes and with transistor output—a so-called "hybrid" design—sells for about the same amount as a comparable all-tube radio. For cars with 6-volt ignition systems, the only radio sets available are those using tubes throughout.

If you are planning to buy an automobile radio which you or a local serviceman will install in your car, you may be interested in knowing what features may be present. Any one of the inexpensive all-tube receivers available will likely be a so-called universal model which is attached to the lower part of the dash. Speaker, parts controlled by the knobs, and the "works" are all in a single metal can. Such a radio is called "universal" because it can be installed in practically any car. It can be expected to be relatively less desirable than a higher-priced set built for the car because it employs only the minimum number of tubes (usually five), circuits, and components needed to do a passable job. But while it does work, reception will be

The separate "power unit" in the Sears All-State 528-62680 employed three Type 2N176 transistors. Since that type is not as yet listed in the radio parts companies' catalogs, there might be delays in servicing the Sears set in the event replacement of a transistor is required.

The 6-1/2-inch speaker furnished with the Sears All-State 528-62680 receiver had a small cone centrally mounted to extend the high-frequency response. While this was called a "coaxial-type dual cone," in the Sears' catalog, it was not a true coaxial speaker as some readers might infer.

accompanied by background noise, and the set either can't pick up many stations, or its audio frequency response is limited.

With the addition of a single tube, present in some "universal" automobile radios, performance is likely to be improved considerably. The presence of the sixth tube may be indicative of the inclusion of a radio-frequency amplifying stage. In a well-designed radio receiver, that added stage improves station-getting ability (sensitivity) and also reduces the number of unwanted "squeals" you often hear coming from some car radios. If there is a resultant increase in selectivity, that would tend to impair tonal quality. (Ordinarily this is not of great importance in an auto radio.) *Motorola Models 596-12* and *397* are examples of six-tube receivers with radio-frequency stages. With the sixth tube, selectivity will likely be less good, which is desirable if one wants good tonal quality, but has some disadvantage in increasing susceptibility to adjacent-channel interference. Unfortunately, you can have good tonal quality or a minimum of interference in an automobile radio, but you can't have both to a great degree.

Automobile receivers having more than six tubes are likely to show no great improvement over the usual six-tube set in regard to the features already discussed, but they will likely incorporate a so-called dual or push-pull output stage which should provide more pleasing listening qualities when the listener likes or needs a good volume of sound.

In the "hybrid" or combination tube-transistor models currently in wide sale, particularly as original equipment on new cars, the performance available with five tubes plus one transistor corresponds in general to the usual performance with six tubes. Such a receiver, however, while offering the advantage of lower battery drain (see listings), usually gains its advantage at the expense of slightly more noise (hiss) in the output, a factor of minor importance, probably, to the user of an auto radio. *Motorola Model CTA6T* and *Ford Model 75 BF 178569* are "hybrid" sets. The *Sears All-State 528-62680*, with four tubes and three transistors has performance characteristics similar to an all-tube receiver with push-pull output (seven to eight tubes). It will be noted, however, that battery drain for this receiver was less than half that of the inexpensive *Sears All-State* (Cat. No. 28—06330) receiver which employed five tubes.

The great majority of new car buyers prefer to have their car radio installed at the factory or by the dealer before delivery. Other buyers purchase a radio of their choice and either make the installation themselves or have it done by an independent radio serviceman. Radios for installation by the purchaser himself comparable in quality to those furnished already installed by the auto manufacturer are usually from $10 to $35 lower in cost, and anyone wishing to take the trouble can make a considerable saving by purchasing a receiver such as the *Motorola 397*.

In the listings, all receivers tested were for operation with 12-volt batteries except the *Motorola 397* (6 volts). The *Sears All-State* (Cat. No. 28—06330) was the only receiver which used variable capacitors (a design seldom employed in modern automobile radios), and had noticeably poor automatic volume control (AVC) action. With good AVC action, the tendency is reduced for automobile radios to fade out when going along hillsides or under viaducts or to change their sound output volume in areas where the signal may be alternately strong and weak as the car travels along the highway. *Motorola 596-12* and *CTA6T* and the *Sears All-State Model 528-62680* had excellent AVC action. The *Sears All-State* (Cat. No. 28—06330) was the only receiver tested which was notably poor in rejecting electrical interference from outside sources.

If you wish to buy an inexpensive car radio, you will likely find the Motorola 397 far superior to the Sears All-State (Cat. No. 28—06330). For anyone willing to spend the additional money for the added advantages, the Sears All-State 528-62680 has a noticeable edge on the other automobile radios tested.

A. Recommended

Motorola, Model CTA6T (Motorola Inc., Chicago 51) $69.95. Custom model. Five tubes and one transistor.

6 x 9 in. speaker, to be mounted separately. Controls: volume, tuning, tone, and five preset push buttons for tuning. Battery power drain, 25 watts. Sensitivity (ability to receive a relatively large number of stations, see text), average. Selectivity (ability to separate two stations which are next to each other on the tuning indicator), fair. Audio frequency response, very good, but see comment under *Sears All-State 62680*. Volume of sound output, below average. A well-designed receiver. **3**

Sears All-State, Model 528-62680 (Sears-Roebuck's Cat. No. 28—T630) $74.70, plus postage. Custom model for 12-volt cars only. Four tubes and three transistors. 6½-in. speaker. Controls: volume, tuning, tone, sensitivity, and five preset push buttons. Battery power drain, 14.5 watts. Sensitivity (ability to receive a relatively large number of stations, see text), slightly below average. Selectivity (the ability to separate two stations which are next to each other on the tuning indicator), poor. Tone quality, good (audio frequency response, very wide). Power output, excellent. Because of the peculiar difficulties under which an automobile receiver works, it may be questioned whether the superior tone quality of this receiver will be of much use to most owners of an AM car radio. In some areas, the superior tone quality of this receiver would be an advantage. In other areas, particularly at night, adjacent channel interference, because of the receiver's poor selectivity, may be far too great to allow fully satisfactory reception (on account of interfering signals). **3**

B. Intermediate

Motorola, Model 397 (Motorola Inc.) $39.95. "Universal" mount, but can be "custom mounted" on several makes of cars. Six tubes. 4½-in. diameter speaker mounted within radio cabinet. Set has convenient provision for connecting a rear-seat speaker, if desired. Controls: volume and tuning. Battery power drain, 28 watts. Sensitivity, slightly below average. Selectivity, good. Audio frequency response, satisfactory for an automobile radio. Power output, good. **1**

Motorola, Model 596-12 (Motorola Inc.) $59.95. The *597-12* is similar. "Universal" mount, but can be "custom mounted" on several makes of cars. Six tubes. 6 x 9 in. speaker furnished, to be mounted separately. Controls: volume, tone, tuning, and five preset push buttons for station selection. Battery power drain, 25 watts. Sensitivity, average. Selectivity, fair. Audio frequency response, good. Power output, good. **2**

Ford, Model 75 BF 178569 (Ford Motor Co., Detroit) $89. Sold by Ford dealers for custom installation in 1957 model *Ford* cars. Five tubes and one transistor in power output stage. 6 x 9 in. oval speaker. Controls: volume, tuning, tone, and five preset push buttons. Was the only receiver tested which used printed circuit wiring. Battery power drain, 24 watts. Sensitivity, average. Selectivity, good. Audio frequency response was only fair—there was little sound output below 200 cycles per second. **3**

* * *

The following receiver is judged less desirable in several respects than the other automobile radios tested.

Sears All-State (Sears-Roebuck's Cat. No. 28—06330) $36.95, at retail store; $34.65, plus postage, through catalog; $29.85, plus postage, in Summer Sale Catalog. "Universal" under-dash mount, but can be "custom mounted." Five tubes. (No radio-frequency amplifying stage.) Controls: volume and tuning. 4 x 6 in. speaker. Battery power drain, 30 watts. Sensitivity, average. Selectivity, good. Relatively poor audio listening quality. Power output, fairly good. **1**

Safety belts

THE ARTICLE on this subject in the March issue created considerable interest among our readers, and we received many letters from persons who took a strong position in favor of universal use of safety belts. Most of the writers admitted that safety belts had their limitations, but claimed that they should be used nevertheless. None, however, submitted proof that safety belts for the front seats would prevent injuries to the head, which are a most common and most dangerous type of injury. A number of cases have come to CR's notice in which a safety belt contributed to injury or death, or caused an accident, or in which the absence of a safety belt would have given the person involved at least a chance for life or would have prevented serious injury. The most recent of these cases was the airplane accident in which the President of the Philippines, Ramon Magsaysay, was killed. One of the men of 26 in the party survived; his life was saved because he had disobeyed the injunction given to everyone before the accident to buckle on his safety belt. Choosing not to follow the order, he was able to crawl from the wreckage and lived through an accident which killed 25 others.

If you plan to buy safety belts for your car, it would, in our view, be best to have them installed for the passengers in the rear seats. There the belts can be of value in preventing the rear-seat passengers from being thrown forward projectile-wise into the heads and bodies of the front-seat passengers; restraining the rear-seat passengers will reduce greatly the impact forces to which the passengers in the front seat will be subjected in the event a head-on crash or collision occurs.

Camera gadget bags

THE AVERAGE AMATEUR PHOTOGRAPHER going on a vacation or a trip is likely to take along one or two cameras, a flash gun and a dozen or so bulbs, an exposure meter, filters and lens accessories, spare film, and film data sheets. Some will even take a tripod. The gadget bag is almost a necessity to keep all this equipment together and readily accessible for use, and will be well worth the moderate price one must pay for some fairly good ones. The cheapest cost as little as $1.50; the luxury jobs run to $35 or more.

Some manufacturers design their bags for a specific type of camera and its usual accessories. Thus a gadget bag may be specially adapted to carrying a miniature, twin-lens reflex, press, or stereo camera, or a motion picture camera. It is important to get a bag of ample size, for one that is crammed to capacity is inconvenient and exasperating to use when a certain piece of equipment is needed in a hurry.

One 8 x 10 x 3 inch bag with an outside pocket will hold a 35 mm. camera, a twin-lens reflex camera, a folding flash gun, an exposure meter, filters, lens shades, a few rolls of film, and about a half dozen flash bulbs, but this amount of equipment packs the bag almost to the bursting point and strains the zipper closure. With a bag so closely packed, finding a specific item becomes a major operation as with some women's handbags. On the other hand, an 8¼ x 10 x 4 inch bag with outside pockets will hold the needed equipment without overcrowding.

There are so many combinations of cameras and equipment that the best solution is to collect all photographic items one needs and expects to carry in the future and actually fit them in the bag for size before finally deciding on the bag to buy.

The most expensive bags are made of full-grain or top-grain leather, but the cheaper plastic bags will serve well enough when the luxury look of good leather is not important. Some of the plastic materials used are claimed to be more durable than leather, but our experience would lead us to doubt that, where hard service is involved.

A. Recommended

Sears (Sears-Roebuck's Cat. No. 3—8372) $4.50, plus postage. Plastic with cloth backing, brown welting. Size, 10½ x 7¼ x 3¼ in. with outside pocket, 8 x 4 x 1 in. Top opening with medium-weight (medium-toothed) zipper. Clear plastic pocket, heat sealed to inside of top. Shoulder strap had a plastic pad. Stiffeners in ends, top, and bottom. Construction, finish, and workmanship, good. Outside appearance fairly good for a low-priced bag. 1

Hinson 2652T (Hinson Mfg. Co., Waterloo, Iowa) $5.95. Made of *Hinsolon* (a vinyl plastic coated cloth). Size, 9½ x 8 x 3¼ in. with outside pocket, 7 x 4½ x 1 in. Top opening, with medium-weight zipper. Stiffeners used in ends, bottom, and top. Top would not open fully without straining the zipper. Materials, finish, construction, and workmanship judged satisfactory. 1

Kent B-22 (Sterling Howard Corp., 561 E. Tremont Ave., New York 57) $12. Made in Japan. Top-grain pigskin. Size, 8¼ x 10 x 4 in. with two outside pockets,

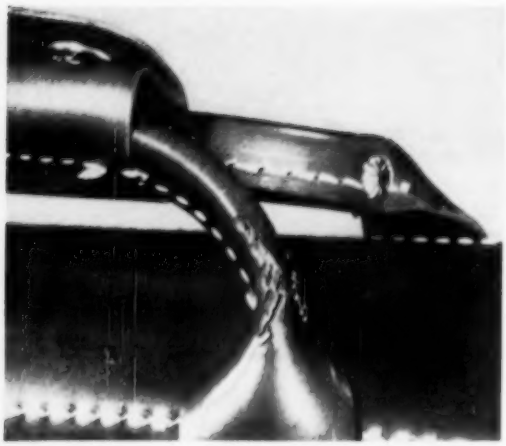
one 5 x 2¾ x 1¼ in. and one 5 x 3½ x 1¼ in. Top opening, with medium-weight zipper closure and lock and key. Stiffeners used in ends, bottom, and top. Had four metal feet on bottom, and straps for carrying tripod. Shoulder strap had leather pad with foam-rubber facing on one side to prevent slipping from the shoulder. Interior of main compartment and top, lined with velvet; there is a flexible leather divider. Two small leather pockets with snap closures are fastened to the inside of the top. A very well-designed bag of good construction, finish, and workmanship. **2**

Tower, No. 8326 (Sears, Roebuck & Co.; made by J. B. Perrin Co.) $12, plus postage. Top-grain cowhide with dark brown plastic welting. Size, 8 x 6¼ x 3¼ in. with outside pocket, 6¼ x 3½ x 1 in. Top opening with heavy-weight (coarse-toothed) zipper closure. Stiffeners used in ends, bottom, and top. Shoulder strap had leather pad with foam-rubber pad on one side to prevent slipping. Outside straps provided for carrying tripod. Interior had flexible leather divider, and leather pocket with zipper closure attached to top. Materials, finish, construction, and workmanship judged very good. Available in three larger sizes at $15, $19.50, and $24. **2**

Wards (Montgomery Ward's Cat. No. 67—3377; made by J. B. Perrin Co.) $12.95, plus postage. Top-grain saddle leather with plastic welting. Size, 10½ x 7¼ x 3¾ in. with outside pocket, 8½ x 4½ x 1¼ in. Top opening with medium-weight zipper. Stiffeners used in ends, bottom, and top. Flexible leather divider. A high-quality bag of very good materials, finish, construction, and workmanship. **2**

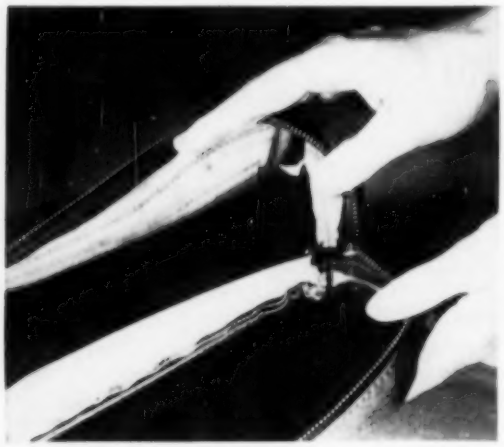
A professional type of gadget bag favored by those who wish to carry more items than the average amateur would perhaps need. Such a bag has the disadvantage of being comparatively heavy (about 40 percent heavier than one of the lightest bags of equivalent size).

An 8-1/4 x 10 x 4 inch bag which comfortably holds the supplies and equipment shown in the picture.



Objectionable cracking of the handle connections of this bag made of Neolite was noted. This leather substitute does not well endure a sharp fold or short radius bend.

The type of zippered opening shown in this picture saves cost in manufacture but has the disadvantage that it does not provide easy access for putting things into and taking them out of the bag.



Fine-toothed zipper closure is considerably strained and is likely to have a short life on that account. It does not extend far enough around the rear corners of the bag to permit the top to open wide and freely.

Note strong, coarse-toothed zipper closure which extends well around the rear corners of the bag and so permits the top to open wide and to give good access to the contents.

B. Intermediate

Diamond C-711 (Louis Lefkowitz & Bros., Inc., New Brunswick, N.J.) $8.95. Embossed-grain split leather with dark brown plastic welting. Size, 10 x 8½ x 3½ in. with outside pocket, 7½ x 5 x 1½ in. Top opening with medium-weight zipper. Similar in construction and appearance to *Kam-ra Bag No. 821*. **2**

Kam-ra Bag, No. 821 (Service Mfg. Co., 155 Saw Mill River Rd., Yonkers, N.Y.) Sold at various prices up to $14.95. Embossed-grain split leather with dark brown plastic welting. Size, 10½ x 7¼ x 3½ in. with outside pocket, 8½ x 4½ x 1¼ in. Top opening with medium-weight zipper closure. Stiffeners used in ends, bottom, and top. Flexible leather divider. Interior was not lined and had several exposed split rivets which could scratch or mar equipment. Materials, finish, construction, and workmanship judged fair. **2**

C. Not Recommended

Alco, No. 125A (Alco Photo Supply, 902 Broadway, N.Y.C.) No set price; usually sold at around $2.50. Plastic with dark brown welting. Size, 10½ x 8 x 3¼ in. Slit opening in center of top with lightweight (fine-

toothed) zipper closure. Shallow outside pocket with zipper. No stiffener provided in ends. Type of opening makes bag difficult to load and unload. Quality of stitching, poor. **1**

Alco, No. 225 (Alco Photo Supply) No set price; probable retail price around $3.50. Plastic with dark brown welting. Size, 10 x 8 x 3 in. with outside pocket, 7 x 4¾ x 1 in. Top opening with lightweight zipper closure. Bag would not open fully without straining zipper. Plastic-covered stiffeners in ends, bottom, and top. Construction and workmanship, much below average. **1**

Alco, No. 325 (Alco Photo Supply) No set price; probable retail price around $5. Plastic with cloth backing, dark brown welting. Size, same as *Alco No. 225*. Top opening with lightweight zipper closure. Bag would not open fully without straining zipper. Had plastic divider. Plastic-covered stiffeners in ends, bottom, and top. Construction and workmanship, somewhat below average. **1**

Sears (Sears-Roebuck's Cat. No. 3—8306) $2.59, plus postage. Plastic. Size, 10½ x 7¼ x 3 in. with outside pocket, 7½ x 4¾ x 1½ in. Outside pocket was heat sealed (not stitched) to bag. This type of construction on other articles tested by CR has not proven durable. Top opening with medium-weight zipper. Plastic-covered stiffeners in ends, bottom, and top. Construction, finish, and workmanship were otherwise satisfactory. **1**

Pro Bag (Montgomery Ward's Cat. No. 67—3347) $7.95, plus postage. Size, 10½ x 8 x 4 in. Made of *Neolite*. A semi-rigid bag with flap top and snap closure which can be locked with a key. Carrying handles provided in addition to detachable shoulder strap. Had 4 metal feet on bottom. Stiffener used in ends and bottom. Interior had a flexible leather divider. A well-made bag, but the *Neolite* cracked badly at sharp folds, as was reported by Consumers' Research some years ago in connection with brief cases. **2**

Disinfecting water for emergency use

THE PROBLEM of disinfection of small quantities of drinking water from questionable sources is not simple, as it might seem, as there are certain impurities that may exist in the water that may interfere with the action of a germicide, for example, ammonia compounds and other nitrogenous impurities. Degree of alkalinity is also a factor, as is the temperature of the water.

Boiling is desirable to destroy pathogenic organisms but is often impracticable. A satisfactory method for emergency disinfection of drinking water is the use of tetraglycine hydroperiodide in tablets designed to liberate 8 milligrams of elemental iodine in one quart of water. This method works effectively on some test organisms, even in quite cold water, provided 20 minutes are allowed.

A U.S. Navy report by Donald P. Morgan and Raymond J. Karpen states that drinking iodine-treated water over a limited period was not found to cause any detectable injury to health. Careful study on this point was important, because iodine in excess can cause interference with normal body mechanisms in a number of ways.

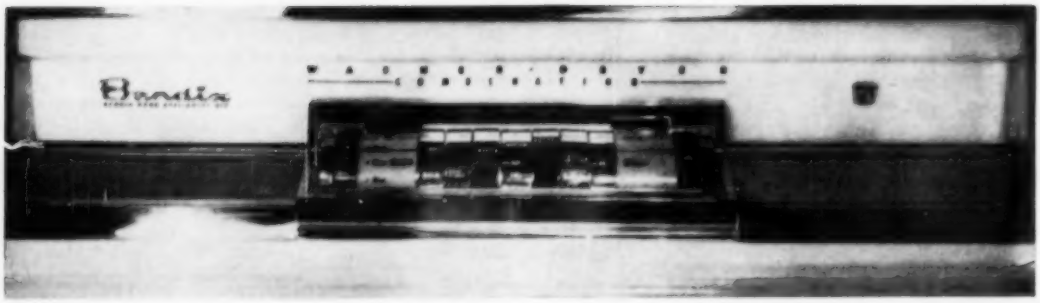
A paper by Shih Lu Chang and J. Carrell Morris of the Division of Applied Science of Harvard University also reported that "iodine is a suitable agent for the emergency disinfection of water supplies" and that "it is effective against all types of pathogenic organisms within a reasonable time at a concentration of a few parts per million." Tablets containing tetraglycine hydroperiodide were found to be perhaps the most suitable of the available iodine compounds.

Workers in the U.S. Public Health Service (Chambers, Kabler, Malaney, and Bryant, at the Cincinnati laboratory) used a solution of iodine in alcohol and water for their work which led to the conclusion that iodine resembles chlorine in bactericidal action but that higher concentrations of iodine are needed.

Tetraglycine hydroperiodide tablets as used by the Armed Services for disinfection of water in canteens are available from Wallace & Tiernan, Inc., 25 Main St., Belleville, N.J. A similar product, tetraglycine potassium periodide tablets, known by the trade name *Potable-Aqua Tablets*, are offered by Frost Laboratories, Inc., 430 Lexington St., Auburndale, Boston 66.

Dr. B. H. Kean (associate professor of clinical medicine and assistant professor of public health and preventive medicine, Cornell University Medical College), writing in the New England Journal of Medicine for June 6, 1957, mentions the availability of "Iodine Water Purification Tablets" in which the active ingredient is tetraglycine hydroperiodide, or *Halazone Tablets* (a mixture of mono- and dichloro-amides containing about 25 percent of active chlorine, listed in the National Formulary), for those visiting areas where sanitation is not good and where bottled water is not consistently available. Dr. Kean advises, however, that dependence on the disinfecting tablets should be avoided, if possible.

The products described here are for *emergency* use only, and should be avoided whenever it is possible to obtain drinking water of assured quality.



Bendix Duomatic washer-dryer combination

A REPORT on "Washer-dryer combinations" which covered the *Easy*, *General Electric*, *RCA Whirlpool*, and *Westinghouse* machines was presented in the January 1957 issue of the BULLETIN, but did not include the *Bendix Duomatic* combination. The *Bendix* has now also been tested and the information which follows will be of interest to many, and a useful supplement to the January report.

The present study includes the results of tests on the all-electric *Bendix Duomatic* in which both washer and dryer are operated by electricity, and on the so-called "gas model" in which the washer is operated by electricity and the dryer by gas.

The *Bendix*, like other washer-dryer combinations, offers certain advantages and disadvantages compared to the separate washer and dryer units. The combination requires less floor space. Since both units are in one cabinet, the operator can wash and dry a load of wash without removing the wash from the machine or handling it until it is dry.

While a single machine for the two operations is a convenience, it involves some inconveniences, too. The single unit means that both the washer and dryer are tied up at the same time, thereby making it impossible to wash a second load while the first is being dried. Combination machines are costly initially—besides, repairs are pretty likely to come high. If the machine fails to function as either a washer or dryer, the owner may find it necessary to replace the combination and take what she can get for it (and she may not get much!). An all-electric combination costs more to operate than two single units—10 to 14 cents per load for washing and drying in the all-electric combinations, as compared to 6 to 8 cents with the separate electric units. Cost with a gas model combination will be about 3 cents per load, or about the same as with a separate electric washer and a gas dryer.

A serious disadvantage of a combination is the greater wrinkling of the clothes when they are dried. A combination machine is equipped with a drum or cylinder larger in size than normally used in washing machines, but smaller than the drums used in dryers. Because of the drum size being a necessary compromise, combination machines wrinkle the clothes more than the average dryer—unless smaller loads are dried. In addition, the *Bendix* tends to roll up the clothes, causing them to become wrinkled even more than in most other combinations. On

Brand	Time to wash, full cycle, minutes	Time to dry, full load, minutes	Water used, gallons			Water left in clothes, percent dry weight	Electricity used for complete cycle, watt-hours		Temperature in dryer, degrees F	
			washer		dryer					
			hot	cold	cold		washer	dryer	drying range	peak
Bendix CGR C	40	45	18	11	26	83	1080	3760	150-180	245
Bendix CGV C	40	45	18	11	—	83	320	275*	130-160	230

* This washer-dryer also uses approximately 13,400 Btu of gas (equivalent to 3930 watt-hours of electricity) to supply heat for drying a full load

the other hand, the combination machines do a somewhat better job of washing than the regular drum- or cylinder-type washing machines.

In general, extraction of water from clothes is poorly done by most combination machines, which, of course, means that the excess water will have to be removed during the drying cycle. In this respect, however, the *Bendix* gave superior performance and, in water extraction, it almost equalled the good performance of most straight automatic washing machines. Instead of requiring 35 to 45 gallons of cold water in the drying cycle for condensing the steam as some other combinations do, the *Bendix* used 26 gallons of cold water.

Effectiveness of washing of the *Bendix Duomatic* with sudsless or controlled-suds detergents was about the same as other combinations, and would be judged fair in comparison with a good agitator washing machine.

B. Intermediate

Bendix Duomatic, Model CGR-C (Philco Corp., Philadelphia 40) $550, all-electric model. Effectiveness in washing an 8-lb. load, fair. Machine has pre-rinse or pre-soak cycle and provision for washing small, medium, and full loads. Dimensions: 36 in. wide, 47 in. high, 27 in. deep. Water temperature selection: for wash—hot, medium, warm; for rinse—warm, cool, cold. Machine had more than normal vibration during the fast spin and was relatively noisy.

Bendix Duomatic, Model CGV-C (Philco Corp.) $550. Washer unit works on electricity, dryer heater operates on gas. Performance of this combination, similar to *Model CGR-C*.

Power mowers can kill and maim

Newspaper accounts illustrative of the hundreds of accidents in use of power mowers (mostly rotary). The article begins on page 24.

Lawn Mower Hurls Metal, Killing Man

Vincennes, Ind. (Spl.)—A small piece of metal picked up by a power lawn mower and hurled into the body of [redacted] Vincennes, caused the death of the 70-year-old farmer.

Arm Of Child Amputated In Mower Mishap

Little 18-month-old [redacted] was in critical condition today at Lower Bucks County Hospital, Bristol, after undergoing an emergency operation in which her right arm was amputated and physicians took more than 100 stitches in her body.

Police said the baby toddled into the path of a power lawnmower operated by her mother.

Belvidere Boy Is Injured By Power Mower

[redacted] Belvidere, suffered a cut of the right index finger while cleaning a power mower Saturday. He was among the seven per- [redacted] at Warren Hospi-

Wire or Nail Killed Child

A piece of wire or nail about 1½ inches long, whirled through the air by a rotary lawnmower, caused the death Sunday of [redacted] an autopsy report disclosed today.

The wire or nail pierced the 6-year-old girl's left chest cavity, cut two veins leading to her heart and lodged in her right lung.

[redacted] Clovis was struck while

Woman's Fingers Cut Off in Mower

Fifty-two-year-old Mrs. [redacted] lost the four fingers of her right hand Monday when she reached down to see if her power mower was overheating.

Her son, [redacted] said Mrs. [redacted] was mowing the lawn in front of the house when the blades stuck.

Mower Blade Kills Woman

GASTON (AP) — A woman sealed quietly on her door step was fatally injured yesterday by a flying piece of steel from a rotary lawn mower blade.

Girl, 13, Is Injured By Power Mower

(The Register's Iowa News Service.)

DAVENPORT, IA. — [redacted] 13, Pleasant Valley, was in good condition in a hospital here after half her left foot was severed by a power mower at her home Thursday. She told deputies she was pushing the mower when it became stuck on a slight incline. She said she slipped on the grass and in falling, caught her foot in the whirling blades.

Woman Badly Cut By Mower Blade

TIVERTON, R. I., June 28 (AP) — A flying lawnmower blade nearly severed the left leg of a woman as she waited for a bus on a street corner.

Power Mower Injures Teacher

An [redacted] Township High School teacher suffered a severe cut on the leg yesterday while operating a power mower at his home in [redacted]

Police said [redacted] was cutting grass when the blade of his rotary-type [redacted] 47, struck a rock. The rock [redacted] splinter tore into [redacted]

Power Mower Mishap Fatal

ANDERSON, S.C. (AP)— [redacted] 27, was killed yesterday when a power lawn mower hurled a tiny piece of wire into his heart.

A [redacted]

GIRL LOSES TOES TO POWER MOWER

PANAMA, June 18—The fourth person to be hospitalized here this season by a rotary-type power [redacted] lost all five toes on [redacted] when she

MOWER MISHAP.

CHARLES CITY (CNS) — Mrs. [redacted], was in the Cedar Valley Hospital here Saturday as the result of a power mower accident. She was taking the grass out of the mower when the blade severed the ends of three fingers on her right hand. Mrs. [redacted] will be 76 years old Tuesday.

Silent Scott electric-powered rotary mower

Power lawn mowers

Rotary, reel, or "hammer-knife" mower— which type should you buy?

IN THE JULY ISSUE, CR discussed and rated a number of well-known makes of rotary mowers. The conclusions reached from this study and from tests of reel and hammer-knife mowers were that the rotary was superior to the reel type in mowing lawns that had weeds such as buckhorn and dandelion; the rotary mower would cut higher grass, was superior for trimming around bushes, etc., and it eliminated a good deal of hand trimming.

The rotary mower, however, has one very serious disadvantage: it is an *extremely dangerous* tool, capable of inflicting serious injury or even death, not only to the operator, but to other people in the vicinity of the mowing operation. Space was not available in the previous BULLETIN to discuss this matter of mower hazards as fully as the subject warranted; we are therefore presenting further information in this article on the hazards of rotary mowers so that our readers, and members of their families, and neighbors may be aware of the risks involved.

Reel power mowers

These will do an excellent mowing job on lawns that are in good condition and relatively free from weeds; they are much less likely to "scalp" high spots in the lawn than rotary or hammer-knife mowers. Grass catchers can be used with reel mowers but not with rotary or hammer-knife mowers. On that account mowing must be done more frequently with a rotary than a reel mower used with a grass catcher. When the grass is allowed to grow too high, the long clippings will tend to smother the lawn, unless they are raked up. Short (about one inch or less) clippings evenly distributed do not harm the lawn.

Reel mowers are much less dangerous than rotary mowers; they do not throw stones or other foreign objects with sufficient force to cause serious injury, and the possibility of a hand or foot being hit by the revolving blade is much less; however, accidents have occurred with reel mowers, chiefly to those who have

attempted to free a jammed reel without shutting off the engine.

A. Recommended

Craftsman (Sears-Roebuck's Cat. No. 99—8144) $89.50, plus freight.

Mower: Width of cut, 20 in.; height of cut adjustable from ½ to 2¼ in. (good). Chain and belt were not guarded. The cutter bar was adjusted by a cam arrangement with locking screws, which was relatively simple to use. Handle flexibly connected to mower (desirable). The reel had five blades. Sealed ball bearings on reel shaft. Porous bronze wheel bearings. Weight, 97 lb.

Engine: *Briggs & Stratton*, 4-cycle, rated 1.75 hp. Clutch, slipping-belt type. Recoil starter.

Performance in test, good. The reel axle was subject to clogging with grass at one end (the chain-driven end was protected by a shield). Construction and finish were judged good. **2**

Cooper Klipper (Cooper Mfg. Co., Marshalltown, Iowa) $131.25.

Mower: Width of cut, 18 in.; height of cut adjustable from ½ to 2¾ in. (good) by raising or lowering wheels and roller. This method is very desirable as it permits keeping the cutting unit level without regard to the height adjustment. Chain fully guarded; belt partially guarded. Sealed roller bearings on reel. *Oilite* wheel bearings. Handle flexibly connected but not adjustable for height. Cutter bar adjusted by spring-loaded opposing screws, which are easily accessible. Mower can be self-sharpened by use of a special round belt ($1.50). Wheels and side plates of die-cast zinc alloy construction. This type of construction, as used by Cooper, appears to have stood up well in use. Weight, 101 lb.

Engine: *Briggs & Stratton*, 4-cycle, rated 1.6 hp. Clutch, slipping-belt type. Recoil starter.

Performance in test, very good. A well-built well-finished mower. **3**

Eclipse Rocket (The Eclipse Lawn Mower Co., Prophetstown, Ill.) $134.50, f.o.b. factory.

Mower: Width of cut, 20 in.; height of cut adjustable from ¾ to 1½ in. Cutter reel had five blades and roller bearings. Handle flexibly connected (desirable). Weight, 120 lb.

Engine: *Briggs & Stratton*, 4-cycle, rated 1.75 hp. Recoil starter.

Performance in test, very good. A sturdy, well-made mower. **3**

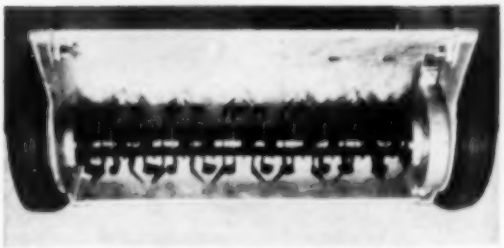
Toro Sportlawn (Toro Mfg. Corp., Minneapolis) $140.

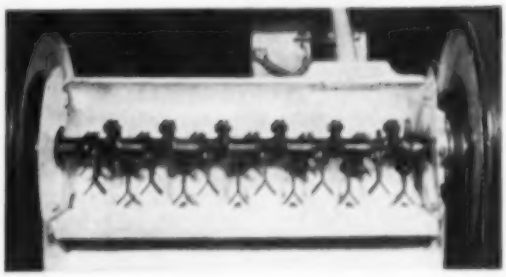
Mower: Width of cut, 20 in.; height of cut adjustable from ¼ in. to 2⅜ in. by changing height of roller by means of hand-operated levers. Roller chain drive, fully enclosed. Body and side plates of steel. Wheel

Two hammer-knife mowers and their cutting units.

Mott Model 18A

Henderson Contour 20





bearings, oil-impregnated bronze. Sealed ball bearings for reel. Reel had six blades. Cutter bar adjusted by opposing screws, which are easily accessible. Handle adjustable for height but rigidly connected (undesirable). Weight, 92 lb.

Engine: *Briggs & Stratton*, 4-cycle, rated 1.75 hp. Clutch of split-pulley type. Recoil starter.

Performance in test, good, but rigid handle made mower tiring to operate. 3

B. Intermediate

Jacobsen Manor (Jacobsen Mfg. Co., Racine, Wis.) $197.50.

Mower: Width of cut, 21 in.; height of cut adjustable from 5/16 to 2¼ in. by raising or lowering two caster-type wheels in front which are locked in position by setscrews. Mower had two rubber-covered drive wheels (8½-in. diameter, 3¼ in. wide) at rear. Cutter bar had five blades (a 7-blade reel is available for fine mowing). Handle flexibly connected to the mower (desirable). Cutter-bar adjustments readily accessible. Weight, 130 lb.

Engine: *Jacobsen*, 2-cycle, rated 1.8 hp. Recoil starter. Disk-type clutch.

Performance in test, very good. A very well-built mower with a good, quiet engine. This mower had the advantage of being able to cut close to trees, edges of lawn, etc. This *Jacobsen* mower would be *A. Recommended* if supplied with a 4-cycle engine. (The 2-cycle engine has the disadvantage of involving the bother of mixing oil with gasoline, and the emission of exhaust smoke, a possible health hazard, unavoidably produced in burning an oil-gasoline mixture.) 3

Combination units

Many persons who have fairly large grounds to keep up will have considered purchasing one of the equipment combinations now available by which a number of different tools may be attached to a single power unit as needed. These would be worth considering only when the homeowner will have use for such labor-saving devices, besides a lawn mower, as a snow plow, edger and trimmer, a tiller unit for plowing and cultivating the garden, etc. The *Toro* is an example of a line of combination lawn and garden tools. *Toro* units include a "power handle" or engine unit at $90; a 22-inch rotary self-propelled mower component at $110; a 20-inch reel unit at $70; for a total of $270 for mowers. A 20-inch reel mower of the same make, complete with its own engine, sells for $140, and a smaller (20 inches as compared with 22 inches) self-propelled rotary mower with its own engine, also $140, giving a total price of $280. The actual cash outlay for the two units making up a lawn mowing combination is only $10 less than for the separate reel and rotary mowers. When other tools, such as those listed below, are purchased, the savings become significant. Units available from Toro (but not tested by CR) are: edge trimmer, $70; 17-inch snow plow, $80; pump, 13½ gallons per minute, $70; sprayer, $120; 1000-watt generator, $200.

Toro Tiller Unit

Toro Power Handle

Toro Rotary Power Handle Unit, Reel Type Mower

In its present form, the *Toro Power Handle* with its lawn-mowing units and tiller unit is not considered a preferable purchase over similar self-powered units. The reel-type unit was found to be satisfactory; the other units tested were not judged to be of superior performance.

Reel and rotary units

A. Recommended

Toro Sportlawn Power Handle Reel Unit (Toro Mfg. Corp., Minneapolis) $70.
Mower: The mower unit was identical with *Toro Sportlawn*, on page 25.
Engine: *Briggs & Stratton*, 4-cycle, rated 2.75 hp. (more than ample when used with the reel mower unit). Weight of complete unit (power handle and mower), 102 lb.

C. Not Recommended

Toro Power Handle Rotary (Toro Mfg. Corp.) $110. Found heavy and difficult to maneuver. For detailed listing, see BULLETIN, July 1957, page 11.

Tiller Unit

B–

Toro Tiller Unit (Toro Mfg. Corp.) $94.50. Rotor, 11½-in. diameter with 20 cutting edges. Width of cut, 15 in. (extensions were available to increase width of cut to 21 in.). Had two 10 x 1.75 rubber-tired wheels (not power propelled); forward traction is supplied by rotor.
Performance in test: Ground preparation was found to be much more difficult than with a regular plow. The machine required a great deal of muscular effort to operate, and the tool had to be run over the ground several times to prepare a good seedbed. Soil must not be too wet or the tines will be clogged. The unit was very difficult and unhandy to move from place to place by pushing; only a strong person could do it. Weight of the tiller unit alone, 60 lb. (with power handle, 104 lb.). This hardly seems to be a practical gardening device in its present form; the design evidently needs revision and further development.

Hammer-knife power mowers

The so-called hammer-knife mowers are actually a modification of the rotary mower, but instead of a vertical shaft with a single blade revolving in a horizontal plane, they have a larger number of smaller blades (jointed, in some cases) revolving on a horizontal shaft. The hammer-knife mowers appear to be much safer to operate than the popular rotary mowers; the hazards were judged to be about the same as with the reel power mowers.

B. Intermediate

Henderson Contour 20 (Henderson Mfg. Co., Fisher Ill.) $130. Roller, $4.95. Leaf mulcher, $3.95.
Mower: Width of cut, 20 in.; height of cut adjustable from ⅞ in. to 2⅜ in. by removing two bolts and adjusting plates to different settings. Not self-propelled. 10-in. diameter semi-pneumatic wheels with sealed ball bearings. Cutter bar has 33 blades (66 cutting edges), not hinged, which rotate in a vertical plane. Sealed ball bearings. Handle adjustable for height.
Engine: *Clinton Model A2100*, 4-cycle, rated 2 hp. Recoil starter.
Performance in test: Did a satisfactory job of mowing on smooth lawns and also cut weeds satisfactorily. On uneven ground, there was considerable scalping of the turf, particularly at the lowest height setting. This, however, may be minimized by use of the roller (available at extra cost—not tested by CR). The mower was easy to push and maneuver except at lowest height setting, when there was some tendency for the rear of the housing to catch in the ground. Weight, 62 lb. 3

C. Not Recommended

Mott, Model 18A (C. W. Mott, Brookfield, Ill.) $158.50. Leaf mulcher, $4.
Mower: Width of cut, 18 in.; height of cut adjustable from ¾ in. to 1¾ in. by moving position of two axle bolts. Not self-propelled. Large 14-in. diameter wheels with sealed ball bearings. Cutter bar has 48 hinged steel knives which rotate in a vertical plane. Ball bearings on cutter shaft, which require lubrication.
Engine: *Clinton Model D-700*, 4-cycle, rated 1.7 hp., equipped with an automatic centrifugal-type engine pulley. The special pulley acts to prevent stalling of the engine, by releasing the belt tension in heavy cutting.
Performance in test: Since small unintentional up-and-down movements of handle change the height to which the grass is cut, the mowing is uneven. On uneven ground, the mower scalped the lawn badly. For mowing high weeds, user must unbolt and reverse the handle; this changes the angle of the mower in permitting the front guard to rise clear of the ground. Did a good job of cutting weeds. The *Mott* was fairly easy to push and maneuver. Weight, 97 lb. 3

Rotary electric mower

O. M. Scott & Sons have produced a rotary-type mower which is relatively safe to use and perhaps about as accident-proof as a mower of this type can be without considerable complication of design. There is no large chute exit; the grass clippings are ejected through a pattern of sturdy aluminum vanes at the front and rear of the mower without clogging. The vanes safeguard the foot from contact with the cutter and should reduce greatly the force of ejection of stones or bits of metal struck by the rotor (though still not eliminating the possibility of injury by such objects).

To start the mower, one or both of two levers on the handle must be held in the "On" position and a push-button switch on the lower part of the handle pressed with the foot and held down until the motor attains full speed. Releasing the levers on the handle shuts the motor off and operates magnetic braking which stops the rotation of the blades (in about 3 seconds).

To keep the cord out of the way of the mowing operation, the handle of the mower is reversed in position when the direction of mowing is to be reversed. This type of handle, sometimes found on gasoline rotary mowers, is dangerous as it makes it possible for the mower to roll back over the operator's foot; but on the *Silent Scott* mower, the design appears to be such as to reduce this hazard to a minimum.

B+

Silent Scott (O. M. Scott & Sons, Marysville, Ohio) **$169**, complete with 125-ft. 3-wire cord and reel. "Unconditionally guaranteed for 5 years," with the strongest most clearly set forth warranty we have ever seen for any electrical appliance.

Mower: Width of cut, 19 in.; height of cut adjustable from ½ in. to 3 in. by ½-in. increments, very easy and quick to adjust. Had shear pin to protect motor if immovable object is hit. Powered by *Westinghouse* continuous-duty motor rated at 7.8 amp., 115 volts. Mower body of strong die-cast aluminum. Weight, 70 lb. Exceptionally well guarded mechanically (see text). Satisfactorily passed tests for electrical safety. The adapter plug provided to permit plugging the 3-wire plug into a standard 2-hole socket was of the same type provided with the hedge trimmers reported in the July 1957 issue, which contained a discussion of the disadvantages of these adapter plugs. Had a light to facilitate mowing at night, which is not desirable as at night grass is usually wet with dew and an electric mower should never be used on wet grass.

Performance in test: Did an excellent job of mowing, and distributed the grass evenly over the lawn. The mower itself pushes easily, but the combined weight of the handle and part of the cord (which must be dragged after the mower) is substantial and pushing the mower becomes very tiring on level ground (much worse on inclines or tall grass) after a short period of use. 3

More information on hazards of rotary mowers

The most common accident with rotary mowers involves injuries to the toes; shoes are no protection against the fast-moving high-energy blades. (See illustration.) Second in importance is amputation of the finger tips caused by attempting to remove clogged grass from the chute or working around the mower with the engine running. Revolving at high speed, the cutter blades are invisible, and the victim does not realize the danger of laceration or amputation until it is too late. The third type of injury can occur not only to the operator, but to other people who may be in the vicinity of the mowing operation. It is caused by the projection of flying objects, such as stones, bits of metal, wire, and other foreign objects, which have been struck and propelled by the fast-moving blade at a speed approaching that of a bullet.

The great hazard in use of a rotary mower is well illustrated by the above picture which shows the effect on a shoe momentarily inserted a short distance in the chute exit of one of the mowers tested.

Most manufacturers now arrange the mower body and guards to shield the whirling blades as well as they can, but some do not succeed as well as others in this endeavor, and none except *Silent Scotts* have found what appears to be satisfactory means to safeguard the area through which the cut grass is thrown outside the mower.

A recent survey of lawn mower accidents dealt with by physicians in Georgia (Dr. John N. McClure, Jr., and his associates Henry C. Steed, Jr., Robert M. Alden, and J. Clinton Terrell) showed that during a two-year period 737 power lawn mower accidents, resulting in 794 injuries, were reported by 463 Georgia physicians. Over 80 percent of these were due to gasoline-powered rotary mowers; 8 percent to gasoline reel mowers; 5 percent to electric-powered rotary mowers. Seventy percent of the injuries were due to direct contact with the mower; 30 percent were caused by objects thrown by the mower blade. Over half the injuries due to direct contact with the mower were injuries to toes or feet; one quarter were due to contact with fingers or hands.

Fourteen percent of the mower accidents caused permanent disabilities. The authors of the article, which appeared in the National Safety Council's Home Safety Review, estimate that nearly 1600 injuries were treated in Georgia in the two years, 1955 and 1956, and consider that there should be extended educational publicity on this problem to discourage careless and uninformed handling of mowers.

OFF THE EDITOR'S CHEST

(*Continued from page 5*)

responsible for the misuse of his products if he should neglect to warn prospective users of the dangers involved. New York State and New York City have drawn up regulations that make warning labels on all household chemicals mandatory. Similar regulations have been adopted in Illinois, Oregon, California, and Hawaii. In New York City, the products that must carry a warning label as containing hazardous substances include floor cleaners, floor waxes, furniture polish, furniture stain, paint removers, rug cleaners, metal polishes, leather polishes, home craft and hobby supplies.

Under discussion also are the types of labels needed. For the three-year-old child who cannot read, the word "hazardous" even in large letters is obviously ineffective. Such labeling is, of course, helpful in putting the child's mother on notice that there is some potential hazard inherent in the product so that she will keep it out of reach. More effective, however, would be the adoption of the French system of labeling. In France, a red label "Poison" must be placed on products that will cause death. A green label is required on all chemicals that may cause illness. French children are taught from their earliest days to recognize and heed these labels. Along the same line, the New Jersey Pharmaceutical Association is considering the use of bright red stickers on certain packages bearing the wording "Keep out of the reach of children!"

Housewives are often unaware of the dangers lurking in the use of some familiar product or combinations of products. Household bleach, for example, sold under various trade names and found in nearly every home, is a water solution (usually 5 percent) of sodium hypochlorite. Any acid or acid-producing substance will react with the bleach and liberate chlorine gas. Two cases have been reported from upstate New York where housewives used a widely-sold toilet bowl cleaner containing sodium acid sulfate. In order to intensify the cleaning action, they added some household bleach and stirred the resulting mixture with a toilet brush. Death came within a few minutes to one woman, while the other, considerably younger, survived, though she required extensive hospitalization and treatment.

As the magnitude of the labeling problem has become apparent, the American Medical Association has taken the leadership in working out a guide for writing regulations for a model law that would require labels to show such information as the product's contents, its possible dangers, directions for safe use, and first-aid instructions.

The A.M.A. Committee on Toxicology, through its secretary, Dr. Bernard E. Conley, estimates that there are at least a quarter of a million different trade-name substances now on the market. The object of the proposed law is to reduce the dangers from careless and ignorant handling and storage of the chemicals in the home, in small businesses, and in other areas where control of exposure to the chemicals cannot be as efficient as it is in the manufacturing process.

Several bills have already been introduced in Congress to regulate the distribution and sales of hazardous articles, and there will undoubtedly be many more. It is a little too early to speculate which bill will give consumers the greatest protection, but the subject is one that should be followed very carefully. Public service organizations and women's clubs should explore the subject and devote at least one meeting during the year to considering the various aspects of the problem in order to bring enlightened public opinion to the support of those who are working to cut down the number of deaths, particularly of young children. Such groups should certainly have a speaker from one of the about 70 poison control centers that are being set up throughout the country. These centers aim at developing an extensive list of brand names, the ingredients or essential ingredient in each product, and the most effective antidote or treatment.

An excellent booklet listing a wide range of common products and the poisons they contain, entitled Poisons and Antidotes, by Dr. Morton J. Rodman, Associate Professor of Pharmacology, Rutgers University, New Brunswick, N.J., is reprinted in Physicians' Desk Reference by Medical Economics, Inc. (Oradell, N.J., 15 cents). Connecticut's State Department of Health has issued a useful booklet called Common Household Poisons and Their Antidotes. A comprehensive work of over 1100 pages is one entitled Clinical Toxicology of Commercial Products (Home and Farm), by Marion N. Gleason, Robert E. Gosselin, M.D., Ph.D., and Harold C. Hodge, Ph.D., D.Sc., Depart. of Pharmacology, Univ. of Rochester School of Medicine and Dentistry.

The prevention of unhappy accidents should be given primary attention both at home and in the community. It will be very useful to consumers in evaluating legislation now appearing on both the state and national levels if they give some consideration to the problems of keeping familiar, but hazardous, household chemicals from inquisitive little fingers, mouths, eyes, and noses; and work out the most effective means of warning against dangerous substances.

Ratings of Motion Pictures

THIS section aims to give critical consumers a digest of opinion from a wide range of motion picture reviews, including the motion picture trade press, leading newspapers and magazines—some 19 different periodicals in all. The motion picture ratings which follow thus do not represent the judgment of a single person, but are based on an analysis of critics' reviews.

The sources of the reviews are:

Boxoffice, Cue, Daily News (N. Y.), *The Exhibitor, Films in Review, Harrison's Reports, Joint Estimates of Current Motion Pictures, Motion Pictures Herald, National Legion of Decency, Newsweek, New York Herald Tribune, New York Times, The New Yorker, Parents' Magazine, Release of the D. A. R. Preview Committee, Reviews and Ratings* by the Protestant Motion Picture Council, *The Tablet, Time, Variety* (weekly).

The figures preceding the title of the picture indicate the number of critics whose judgments of its entertainment values warrant a rating of A (recommended), B (intermediate), or C (not recommended).

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

adv—adventure
biog—biography
c—in color (Ansco, Eastman, Technicolor, Trucolor, Warner Color, etc.)
car—cartoon
com—comedy
cri—crime and capture of criminals
doc—documentary
dr—drama
fan—fantasy
hist—founded on historical incident
mel—melodrama
mus—musical
mys—mystery
nov—dramatization of a novel
rom—romance
sci—science fiction
soc—social problem drama
trav—travelogue
war—dealing with the lives of people in wartime
wes—western

A	B	C		
—	9	4	**Abandon Ship! (British)**	*dr A*
—	11	4	**Above Us the Waves (British)**	*war-dr AYC*
—	3	2	**Accused of Murder**	*cri-mel-c A*
—	2	2	**Affair in Reno**	*mel-c A*
—	1	3	**African Manhunt**	*mel A*
1	12	2	**Albert Schweitzer**	*biog-c AYC*
—	3	4	**Attack of the Crab Monsters**	*sci AY*
—	2	1	**Baby and the Battleship, The (British)**	*com-c AYC*
2	7	9	**Bachelor Party, The**	*dr A*
—	4	6	**Badlands of Montana**	*wes A*
—	2	4	**Bailout at 43,000**	*war-mel AYC*
2	9	6	**Barretts of Wimpole Street, The**	*dr-c A*
1	3	—	**Battle Hell (British)**	*war-mel AY*
—	—	3	**Bayou**	*mel A*
—	4	2	**Beau James**	*biog-c A*
—	—	3	**Beautiful But Dangerous**	*dr A*
—	5	7	**Beyond Mombasa (British)**	*mel-c AY*
—	8	8	**Big Boodle, The**	*cri-mel A*
—	5	6	**Big Caper, The**	*cri-mel A*
—	2	3	**Big Fun Carnival, The**	*car AYC*
—	8	7	**Big Land, The**	*wes-c AYC*
—	1	9	**Black Whip, The**	*wes A*
—	2	7	**Blonde Sinner, The (British)**	*dr A*
2	11	5	**Boy on a Dolphin**	*mel-c A*
—	1	3	**Break in the Circle (British)**	*war-dr A*
—	2	1	**Brothers Rico, The**	*cri-mel A*
—	2	6	**Burglar, The**	*mys-mel A*
—	5	11	**Buster Keaton Story, The**	*biog AYC*
—	3	1	**Calypso Heat Wave**	*mus-com A*
—	4	3	**Calypso Joe**	*mus-com A*
—	1	2	**Chain of Evidence**	*cri-mel A*
—	2	1	**Checkpoint**	*mel-c A*
—	6	3	**China Gate**	*war-mel A*
1	3	—	**Colditz Story, The (British)**	*mel AYC*
—	3	4	**Counterfeit Plan, The (British)**	*cri-mel A*
—	3	10	**Crime of Passion**	*mel A*
—	4	5	**D.I, The**	*war-dr A*
—	3	4	**Deadly Mantis, The**	*sci AYC*
—	3	2	**Delicate Delinquent, The**	*com AYC*
—	2	9	**Delinquents, The**	*soc-dr A*
2	7	9	**Designing Woman**	*com-c A*
2	12	1	**Desk Set**	*com-c AY*
1	4	3	**Devil's General, The (German)**	*war-dr A*
1	2	4	**Dino**	*soc-dr A*
—	3	—	**Doctor at Large (British)**	*com-c A*
1	5	5	**Dragoon Wells Massacre**	*wes-c AYC*
—	3	1	**Dragstrip Girl**	*mel A*
—	6	4	**Drango**	*mel A*
—	3	1	**Duel at Apache Wells**	*wes AYC*
—	—	6	**8 x 8**	*fan-c A*
—	5	5	**Face in the Crowd, The**	*dr A*
5	10	3	**Fear Strikes Out**	*biog AYC*
—	—	3	**Female Jungle**	*dr A*
—	1	2	**Fighting Trouble**	*com A*
—	5	2	**Fire Down Below**	*mel-c A*
—	8	5	**Five Steps to Danger**	*mys-mel AYC*
—	—	5	**Flesh and the Spur**	*wes-c A*
—	3	—	**Footsteps in the Night**	*mys-mel A*
—	2	9	**Four Boys and a Gun**	*soc-dr A*
—	5	4	**French They Are a Funny Race, The**	*com A*
8	9	1	**Funny Face**	*mus-com-c AYC*
—	5	3	**Fury at Showdown**	*wes A*
—	5	6	**Garment Jungle, The**	*doc-mel A*
—	2	1	**Girl from Corfu (Greek)**	*com-c AYC*
—	2	10	**Girl in the Kremlin, The**	*mel A*
—	10	3	**Gold of Naples, The (Italian)**	*dr A*
—	6	—	**Green Man, The (British)**	*cri-mel A*
—	1	5	**Gun Duel in Durango**	*wes AYC*
—	11	2	**Gun for a Coward**	*wes-c AYC*
3	10	4	**Gunfight at the OK Corral**	*wes-c A*
—	8	3	**Guns of Fort Petticoat, The**	*wes-c AYC*
—	5	5	**Halliday Brand, The**	*wes A*
—	8	—	**Happy Road, The**	*com AYC*
1	2	1	**Hatful of Rain, A**	*dr A*
7	9	1	**Heaven Knows, Mr. Allison**	*war-dr-c AYC*
—	5	5	**Hellcats of the Navy**	*war-dr AYC*
—	2	3	**Hell's Crossroads**	*wes-mel A*
—	2	3	**High Terrace (British)**	*mys-mel A*
—	1	7	**Hit and Run**	*cri-mel A*
—	1	2	**Hold That Hypnotist**	*com AYC*
—	3	1	**Hot Rod Rumble**	*mel A*
—	1	3	**Hot Shots**	*com A*
—	2	8	**Hot Summer Night**	*cri-mel A*
—	7	3	**If All the Guys in the World**	*dr AYC*
—	8	6	**Incredible Shrinking Man, The**	*sci-fan AYC*
—	2	1	**Interlude**	*dr-c A*
—	5	1	**Iron Sheriff, The**	*wes A*
—	1	5	**Island in the Sun**	*dr-c A*
—	8	6	**Istanbul**	*mys-mel-c A*

A	B	C		
—	9	2	**Joe Butterfly**	*war-com-c A*
—	2	1	**Joe Dakota**	*wes-c A*
—	4	2	**John and Julie (British)**	*com AYC*
1	5	2	**Johnny Tremain**	*hist-c AYC*
—	2	2	**Julietta (French)**	*com A*
—	8	2	**Kelly and Me**	*mus-com-c AYC*
—	3	1	**Kettles on Old MacDonald's Farm, The**	*com AYC*
—	7	5	**Kronos**	*sci AYC*
—	9	3	**La Sorcière (French)**	*fan A*
—	8	1	**Last of the Badmen**	*wes-c AYC*
—	4	3	**Let's Be Happy (British)**	*mus-com-c AYC*
—	2	1	**Life and Music of Verdi, The (Italian)**	*mus-dr-c A*
—	5	10	**Little Hut, The**	*com-c A*
—	4	10	**Living Idol, The**	*adv-c A*
—	4	14	**Lizzie**	*dr A*
—	6	4	**Lonely Man, The**	*wes AYC*
3	9	3	**Lost Continent, The (Italian)**	*trav-c A*
1	2	1	**Love in the Afternoon**	*dr A*
—	1	2	**Lure of the Swamp**	*mel A*
—	8	6	**Man Afraid**	*cri-mel AYC*
—	—	3	**Man Beast**	*sci-mel A*
—	4	1	**Man on Fire**	*dr A*
—	1	10	**Man Who Turned to Stone, The**	*cri-mel A*
1	11	6	**Men in War**	*war-dr A*
—	4	—	**Midnight Story, The**	*cri-mel A*
—	3	3	**Miller's Beautiful Wife, The (Italian)**	*com-c A*
—	7	6	**Mister Cory**	*mel-c A*
—	5	9	**Monkey on My Back**	*biog A*
—	4	2	**Monster that Challenged the World, The**	*sci AY*
—	11	1	**Naked Eye, The**	*doc-c A*
—	5	1	**Naked Paradise**	*mys-mel-c A*
—	2	5	**Nana (French)**	*dr-c A*
—	4	—	**Night Passage**	*wes-c A*
—	1	8	**Night Runner, The**	*cri-dr A*
—	2	2	**Night the World Exploded, The**	*sci AYC*
—	4	1	**Not of this Earth**	*sci A*
—	2	6	**Oasis (French-German)**	*adv-c A*
—	11	6	**Oh, Men! Oh, Women!**	*mus-com-c A*
—	4	3	**Oklahoman, The**	*wes-c AY*
—	5	2	**On the Bowery**	*doc A*
—	5	5	**Pantaloons (French)**	*com-c A*
—	1	14	**Paris Does Strange Things (French)**	*com-c A*
—	3	5	**Phantom Stagecoach, The**	*wes AYC*
2	4	3	**Prince and the Show Girl, The**	*com-c A*
1	6	3	**Public Pigeon No. 1**	*com-c AYC*
—	6	4	**Quiet Gun, The**	*wes A*
—	6	1	**Raising a Riot (British)**	*com-c AYC*
2	8	5	**Reach for the Sky (British)**	*war-dr AYC*
6	6	—	**Red Balloon, The (French)**	*fan-c AYC*
—	5	—	**Restless Breed, The**	*wes-c A*
—	6	2	**Revolt at Fort Laramie**	*wes-c AYC*
—	6	6	**Ride Back, The**	*mel-c A*
—	1	9	**Ride the High Iron**	*dr A*
—	3	11	**River's Edge, The**	*cri-mel-c A*
—	4	7	**Royal Affairs in Versailles (French)**	*dr-c A*
—	2	1	**Run of the Arrow**	*mel-c A*
—	3	3	**Saint Joan**	*dr A*
—	1	3	**Scandal in Sorrento (Italian)**	*com-c A*
—	2	4	**Seventh Sin, The**	*dr A*
—	8	2	**Shadow on the Window, The**	*cri-mel A*
—	2	6	**She Devil**	*sci A*
—	6	2	**Shoot-Out at Medicine Bend**	*wes AYC*
—	4	4	**Sierra Stranger**	*wes A*
1	4	1	**Silk Stockings**	*mus-com-c A*
1	7	2	**Smiley (Australian)**	*dr-c AYC*
1	8	4	**Something of Value**	*mel A*
8	9	1	**Spirit of St. Louis, The**	*biog-c AYC*
—	1	2	**Spoilers of the Forest**	*mel-c AYC*
—	3	8	**Spring Reunion**	*dr A*
—	4	1	**Stella (Greek)**	*dr A*
—	4	4	**Storm Rider, The**	*wes AYC*
—	7	11	**Strange One, The**	*soc-dr A*
1	2	3	**Sweet Smell of Success**	*dr A*
—	6	4	**Tall T, The**	*wes-c A*
—	7	2	**Tammy and the Bachelor**	*com-c AYC*
—	8	4	**Tarzan and the Lost Safari (British)**	*adv-c AYC*
—	7	8	**Tattered Dress, The**	*cri-mel A*
—	10	3	**Tears for Simon (British)**	*cri-mel-c AYC*
—	—	5	**Tel Aviv Taxi (Israeli)**	*com A*
—	2	2	**Tempest in the Flesh (French)**	*dr A*
—	8	8	**Ten Thousand Bedrooms**	*mus-com-c AYC*
—	4	2	**Third Key, The (British)**	*mys-mel AYC*
3	6	6	**This Could be the Night**	*mus-com A*
3	4	9	**Three Brave Men**	*propaganda-dr A*
—	2	2	**Thunder Over Arizona**	*wes-c AYC*
—	3	3	**Tomahawk Trail**	*wes A*
—	10	8	**Top Secret Affair**	*com A*
—	5	1	**Torero! (Mexican)**	*biog A*
—	7	10	**True Story of Jesse James, The**	*wes-c A*
4	11	1	**12 Angry Men**	*dr A*
—	3	—	**20 Million Miles to Earth**	*sci AY*
—	3	4	**27th Day, The**	*sci A*
—	1	4	**Undead, The**	*fan A*
—	3	8	**Untamed Youth**	*mus-mel A*
—	4	7	**Utah Blaine**	*wes A*
—	3	1	**Value for Money (British)**	*com-c A*
1	5	6	**Vintage**	*dr-c A*
—	—	9	**Voodoo Island**	*cri-mel A*
—	—	6	**Voodoo Woman**	*mel A*
—	5	1	**War Drums**	*mel-c AYC*
—	5	5	**Way to the Gold, The**	*mel A*
—	5	5	**Wayward Bus, The**	*dr A*
2	3	5	**We Are All Murderers (French)**	*dr A*
—	1	2	**Weapon, The**	*mel A*
—	4	6	**Wicked as They Come (British)**	*dr A*
2	9	7	**Wings of Eagles, The**	*war-dr-c AYC*
—	1	2	**Winner's Circle (French)**	*dr A*
—	—	8	**Women of Pitcairn Island**	*mel A*
1	7	6	**Written on the Wind**	*dr-c A*
—	2	2	**X the Unknown (British)**	*mel AYC*
—	—	3	**Yellowneck**	*mel-c A*
2	14	1	**Young Stranger, The**	*dr AYC*
—	3	7	**Zombies of Mora-Tau**	*fan A*

* * *

Reissues (oldtimers you may have seen before) as previously rated in the Bulletin indicated:

1	8	4	**Bride Goes Wild, The (Oct. '48)**	*com A*
—	6	10	**Bright Leaf (Jan. '51)**	*dr A*
9	9	—	**Cinderella (July '50)**	*mus-car-c AYC*
7	4	3	**East of Eden (Sept. '55)**	*dr-c A*
9	7	3	**For Whom the Bell Tolls (Feb. '44)**	*war-dr-c A*
5	11	1	**Gaslight (Feb. '45)**	*mys-mel A*
1	4	10	**Green Dolphin Street (June '48)**	*dr AY*
5	11	1	**Jim Thorpe—All American (Jan. '52)**	*biog A*
—	1	7	**1,000 Years from Now (Captive Women, May '53)**	*sci A*
—	5	12	**Postman Always Rings Twice, The (Oct. '46)**	*cri-dr A*
4	8	4	**Strangers on a Train (Jan. '52)**	*cri-mel A*
—	10	4	**West Point Story, The (June '51)**	*mus-com A*
1	10	5	**Winning Team, The (Jan. '53)**	*biog AYC*
1	10	5	**Young Man with a Horn (Sept. '50)**	*mus-dr A*

Phonograph Records

BY WALTER F. GRUENINGER

Please Note: The first symbol applies to quality of interpretation, the second to fidelity of recording.

Bach: *Violin Sonatas* and *Partitas*. Milstein. Capitol PCR 8370. $3.98. Classics of the unaccompanied violin repertory beautifully played. Here and there you'll detect a romantic touch, but it's a minor criticism. The disk is a credit to this superb violinist, the recording engineers—and to Bach. . . .But without question Heifetz on Victor LM 6105 is more thrilling, vital, personal. Heifetz's sound is less round, less attractive than Milstein's. Yet, it's a pleasure to have two such fine sets to choose from. AA AA

Balakirev: *Symphony No. 1*. Royal Philharmonic Orchestra under Beecham. Angel 35399. $4.98. An exotic, exciting, resourceful, though padded work. Played with finesse, good balance. Rich recording. AA AA

Beethoven: *Symphony No. 3* ("Eroica"). Symphony of the Air under Markevitch. Decca DL 9912. $3.98. This disk must be ranked with the exalted Scherchen-Westminster 18315. The Toscanini-Victor LM 1042 offers a dramatic, forceful performance, but the recording is less good than for the other two. AA AA

Bizet: *Carmen Suites 1 and 2* and *L'Arlésienne Suites 1 and 2*. Philharmonic Symphony of London under Rodzinski. Westminster XWN 18230. $3.98. Very nearly the best of Bizet's orchestral music, melodic, strongly rhythmic, appealing on first and subsequent hearings. Beautiful, controlled orchestral playing. It is questionable, however, whether Micaela's *Air* in *Carmen* should have been included in this scoring. AA AA

Boccherini: *Sinfonia in C, Cello Concerto in C* & **Cambini:** *Sinfonia Concertante* for Oboe, Bassoon, and Orchestra. Orchestre Accademia dell'Orso under Jenkins. Period SPL 732. $4.98. The highspot is the cello concerto, an initial recording, in which Jean Decroos plays the brilliant solo part. Late 18th century music by Italian virtuosi. Fairly well played, though not with that final bit of nuance that makes for great playing. A A

Borodin: *Symphony No. 1* & **Rimsky-Korsakov:** *Capriccio Espagnol*. Philharmonia Orchestra under Galliera. Angel 35346. $4.98. The Borodin is good enough to be heard more often; the R-K, though no novelty, sounds as exciting as ever. Both works are brilliantly played and recorded. AA AA

Francaix: *Symphony for Strings* & **Ibert:** *Divertissement*. MGM Orchestra under Surinach. MGM E 3514. $3.98. Bright, pleasant contemporary works of which Ibert's is the better. It's been played often since 1930 and seems likely to stay around. Well performed. Dry recording. AA A

Gabrieli: *Sacrae Symphoniae*. New York Brass Ensemble under Baron. Period SPL 734. $4.98. Eight pieces for choirs of trumpets and trombones which were revolutionary in concept when published in 1597 and are mighty stirring today. Robustly played. AA AA

Glière: *Quartet No. 4* & **Miaskovsky:** *Quartet No. 13*. Beethoven Quartet. Westminster XWN 18423. $3.98. These are the only recordings of these conservative Russian quartets which are played attractively by Russians. Oldish recording. AA B

Gluck: *Orpheus and Eurydice*. Fischer-Dieskau, Stader, Streich, etc., under Fricsay. 4 sides, Decca DXH 143. $9.98. The oldest opera in the standard repertoire, presented in German, with a baritone singing Orpheus. The world premiere in 1762 was presented in Italian with a male contralto singing Orpheus. Everything about this set is first-rate with one exception: too often Fischer-Dieskau sounds as though he were singing dramatic Schubert *lieder* instead of classical music drama. A AA

Mozart: *Concerti Nos. 21* and *27*. Serkin (piano) with the Columbia Symphony Orchestra under Schneider. Columbia ML 5013. $3.98. Lovely works which Serkin plays with deep feeling and an admirably lyrical quality. Well supported by the small orchestra. There is an off-pitch hum which may be heard, that very possibly emerges from Serkin who likes to "sing" as he plays. Despite this objection in which the slow movement of *No. 21* is all but spoiled by humming, this disk is my first choice of five Serkin disks Columbia has released in the "Serkin Month" promotion. AA A

Mozart: *La Finta Semplice*. Camerata Academica Des Salzburger Mozarteums under Paumgartner. 4 sides, Epic 4SC 6021. $9.96. This opera buffa, written by Mozart at the age of 12, offers many passages of dramatic and musical interest, though it principally suggests masterpieces to come. Sung and played by the group which did it at last year's Salzburg Festival. No great voices are heard, but they are adequate and the performance is well integrated. A AA

Rachmaninoff: *Symphony No. 2*. State Radio Orchestra of the U.S.S.R. under Gauk. Westminster XWN 18424. $3.98. Sprawling, melodic, romantic work played straightforwardly. Recording lacks full bass. Overall, does not match Decca DL 9874, Capitol P 8293, Columbia ML 4433. A A

Sammartini: *Five Pieces*. Orchestre Accademia dell' Orso under Jenkins. Period SPL 731. $4.98. Four short symphonies and two sonatas, mostly for brass and strings, that hold my interest only briefly. Acceptable performance and good recording. B AA

Smetana: *String Quartet No. 1* & **Borodin:** *String Quartet No. 2*. Endres Quartet. Vox PL 10190. $4.98. Slav musical nationalism is the common entity in these melodious quartets, often recommended to the neophyte listener. Fine ensemble and appropriate spirit. Recorded somewhat distantly. AA A

Tchaikovsky: *Symphony No. 2*. Paris Conservatory Orchestra under Solti. London LL 1507. $3.98. Much simpler than his later symphonies, but most attractive. It's called the "Little Russian." The playing sparkles and the recording is exemplary. This recording is my first choice of this work. AA AA

Tchaikovsky: *Symphony No. 5*. Paris Conservatory Orchestra under Solti. London LL 1506. $3.98. One of Tchaikovsky's greatest symphonies played with effective long lyric phrases and dramatic contrasts. Superb sound. Among the best recordings of this work. Yet, the Philadelphia-Columbia ML 4400 still gives me much enjoyment. The Parisians are recorded at a lower volume level but when boosted a wee bit, more detail and roundness of tone emerges. AA AA

Wagner: *Ride of the Valkyries, Tristan und Isolde Prelude* and *Love-Death, Siegfried's Funeral Music* and *Rhine Journey* and *Magic Fire Music*. Philharmonic Symphony of London under Rodzinski. Westminster XWN 18453. $3.98. Popular Wagnerian orchestral selections receive a convincing performance and hi-fi recording. AA AA

Honky-Tonk in Hi-Fi. Westminster WP 6033. $3.98. Recordings of the Seeburg Orchestral Piano, Seeburg Orchestron, Link Piano, Nelson-Wiggen Orchestron, and other nickelodeons. The 12 selections include "Waiting for the Robert E. Lee," "Baby Face," "Lullaby of Broadway," "Who's Sorry Now," "All Alone." As the clever commentary by Ben Hall states, "So, grab your best gal, best pal, and let's steam on back to the days when a roadhouse was definitely not a Howard Johnson's." ? AA

The Consumers' Observation Post

(Continued from page 4)

ATTRACTIVE CURTAIN AND DRAPERY FABRICS that positively will not fade when exposed to light will be welcomed by homemakers everywhere. A promising start in this direction has been made by Eastman Chemical Co. which is offering a guarantee on certain Chromspun acetate fabrics (that have been registered with Eastman) to reimburse the supplier if the fabric fades at any time during its service life as a curtain, drapery, or drapery lining. Somewhat similar guarantees limited to a use-life of two years are being offered by E. I. Du Pont on its "color-sealed" acetate, and Celanese Corp. of America on Celaperm. Women who are shopping for new drapes will do well to ask for these guaranteed fabrics.

* * *

NEW HOUSEHOLD REFRIGERATORS must be equipped with a device enabling the door to be opened from the inside either with a push or with a turn of a knob. The law requiring such an accessory, passed by Congress in August 1956, in an effort to reduce the number of accidental deaths of children from suffocation in refrigerators, goes into effect on refrigerators shipped after November 2, 1958. The National Bureau of Standards recently issued a proposed standard for such safety devices that calls for permitting a refrigerator door to be opened on application of a force applied anywhere along the latch edge of the door on the inside not exceeding 15 pounds; or a knob that will turn clockwise with a force of not more than 5 pounds. The device must operate with the electricity, gas, or other fuel supplied either off or on.

* * *

WHATEVER HAPPENED TO FM PROGRAMS OF MUSIC that used to be transmitted by a number of big radio stations? Recently Hi-Fi magazine did a little investigation to find out why its readers complained so vigorously about the poor quality sound of radio broadcasting that they found inferior to that of television. The magazine reported that in some cases TV studio equipment was new and of high quality while some of the microphones and audio consoles used by the radio stations were long past retirement age. Another difficulty was that few owners of AM stations with FM facilities were making an effort to attract FM listeners and few stations were using the type of transmission lines that carry up to 15,000 cycles. (The rates are higher for extended-range transmissions.) Apparently hi-fi enthusiasts will need to be more vociferous in their complaints to the broadcasting stations if they wish to secure radio programs of better quality.

* * *

THE WEATHER is not only a favorite topic of conversation. It has most important effects on business in many fields. In fact, The Wall Street Journal reports an increasing number of concerns are setting up their own meteorological departments or private weather engineering agencies to keep them posted. One large manufacturer of anti-freeze finds it essential to know what the weather will be in order to have its product ready at the right time and place within three days of the time the mercury first dips below 32 degrees. A large New York bakery reports that a spell of nasty weather can keep shoppers at home and practically put it out of business for the day. In order to know how many men to keep on a night emergency crew, a utility company needs to know the probability of rain or snow during the night. According to one expert, there has been little significant improvement in the accuracy of short-range forecasting beyond 20 percent above what would be arrived at by pure chance or the 50-50 level of accuracy anyone can hit simply by guesswork. Meteorologists are diligently working on the problem of translating the waves and cycles of weather charts into useful statistics, but they frankly admit they are far from attaining a complete understanding of what makes the elements behave as they do.

BEFORE BUYING AN APPLIANCE OF ANY KIND, read the warranty carefully and understand its terms and qualifications. Make careful note of whether in case of needed repairs during the warranty period you will be required to send the appliance prepaid to the factory and pay return freight or express charges that will more than amount to the cost of repairs that might be made by a local serviceman. That is the advice from the Better Business Bureau of Santa Barbara, which parallels the suggestion frequently made by CR that the difference in the terms of warranties may be an important factor in deciding which brand to buy. The B.B.B. also recommends that you fill out completely, date, and mail any card required to register your appliance; and file your warranty in a safe place, with the instruction book. Their further suggestion is that you should not pay for the appliance until it is properly installed and properly functioning.

* * *

DAIRY FARMERS in various sections of the country have devoted considerable discussion to their unhappiness over milk pricing policies of the federal government and in some places there have been milk strikes. Milk prices are fixed through government orders and at one time this system was considered quite a blessing by the farmer. At present, dairy farmers attribute their economic difficulties to the fact that prices, once adequate, are no longer satisfactory because of the increased costs of production. Consumers, however, resist further increases in the retail price of milk. Furthermore, there is an overabundance of milk. At least one milk producer's association suggests that it is about time dairy farmers stopped thinking of the United States Department of Agriculture as a friend of the farmer. The government's power to fix prices, in other words, is now recognized to be a two-edged sword.

* * *

CIGARETTE SMOKING that fell off when headlines associating the incidence of cancer with cigarette smoking appeared three or four years ago was once more in full swing last spring. Cigarette filters apparently were a factor in the industry's comeback. The popularity of filter cigarettes also benefited the manufacturers, for the filter brands sell for 2 to 10 cents a pack more than the regulars and cost less to produce because the darker, heavier leaf, which is a cheaper tobacco, must be used so that the flavor gets through to the smoker. This heavier-bodied tobacco, it should be noted, also produces more nicotine than the lighter, low-nicotine leaf used in the average regular cigarette. Just what effect the figures released by the American Cancer Society early in June showing a "spectacular" relationship between cigarette smoking and lung cancer will have on cigarette sales remains to be seen.

* * *

THOSE ATTRACTIVE SWEATERS of man-made fibers often become unsightly before they wear out. They develop "balls" or "pills" that give them a most unattractive appearance. It appears, however, that a good shave with a safety razor will do much to make such sweaters wearable. Home Service News put out by Colgate-Palmolive Company suggests the technique of placing a sweater, after it has been washed and dried, over a rather firm sofa pillow and shaving off the balls carefully by working at a small area at a time. The process, discovered by Dr. Jules Labarthe of Mellon Institute, is sometimes tedious but it really works, although considerable patience is required and sometimes more than one razor blade. CR found that holding the sweater firmly over a folded Turkish towel would serve as well as the sofa pillow technique. It is important to keep the surface flat so as not to nick or cut the knitted loops. An upward motion was found to be more effective than an up-and-down stroke. Expect to spend about an hour, at least, to secure satisfactory results. One particularly bad case of pilling took three hours of intermittent work and two new razor blades of the double-edge type.

Vacu-Mite Car Interior Cleaner

Roberts Electric Vacuum Brush

Special purpose hand vacuum cleaners

IF YOU READ THE ADVERTISEMENTS in the classified section of your Sunday paper, you have doubtless been tempted many times to send for articles pictured. Among the great number of novelty items offered, one will often see small battery-operated gadgets which are claimed to afford special convenience or facility in doing a variety of jobs.

Consumers' Research recently purchased an intriguing device called the *Roberts Electric Vacuum Brush*. Powered by three dry cells which drive a very small motor of the type used in toy automotive devices, the vacuum brush came complete with brush-nozzle and a small filter bag in which the dirt was collected. It worked—for a while—and was found useful for removing dust, dandruff, loose hair, and the like from clothing. It worked fairly well for cleaning ashes from an ash tray, too. But evidently the bearings in the little motor weren't built to cope with dust and dirt. After only 30 minutes of total use over a period of about one month, the motor housing became the source of a strange, unpleasant, shrill sound and the little dirt collector bag became deflated. There was no longer vacuum or cleaning.

A new motor would make this gadget as good as new. Possibly all it needs is a new bearing to restore its usefulness. But since other purchasers have had a similar experience, the *Roberts Electric Vacuum Brush* has been laid away among the many other now useless novelty items we and millions of others could not resist buying.

Not all vacuum cleaning gadgets are short-lived. About 10 years ago (July 1948), CR reported on a small cleaner for use in an auto. The vacuum produced by the engine manifold was utilized to remove dust and other small pieces of debris from the interior of a car. Though its serviceability was limited, this cleaner, called *Vacu-Mite*, was found to function satisfactorily. In our previous report, we indicated there was a possibility that the dust and dirt picked up by the device in cleaning dirt and grit from a car might get into the engine and cause damage.

In a new sample of the *Vacu-Mite*, recently purchased, it was found that the manufacturer had made certain minor changes in the product. For example, the latest model has a small built-in filter to catch any dust missed by the dirt collector bag. The method of attaching the nozzle to the dirt-collection chamber is also improved.

The *Vacu-Mite* is easily installed on a car with a vacuum-operated windshield wiper. There might be some difficulty—likely a $10 job for your service shop—connected with its installation in some cars equipped with an electric windshield wiper, since with those it would be necessary to add a fitting and make connection to the intake manifold of the engine.

A. Recommended

Vacu-Mite Car Interior Cleaner (Manufactured by Craft Industries, Buffalo; distributed by New York Sales, Box 34, Bay Station, Brooklyn 35, N.Y.) $4.98, postpaid, complete with hose and needed fittings. An upholstery cleaning kit and driver's travel log—for recording car expenses, gas purchases, tolls, etc.—were included with the *Vacu-Mite* in the advertisement as premiums to encourage the prospective purchaser.

C. Not Recommended

Roberts Electric Vacuum Brush (Made in Japan for Fred Roberts Co., 1578 Howard St., San Francisco 3) $2.95. Available in many retail and novelty stores. A good idea, but the motor couldn't stand the gaff.

COMING

Plastic dinnerware

What chief factors should influence your selection and purchase of plastic dishes?

Is a high-priced set necessarily better than a cheaper one?

Do plastic dishes chip, crack, or break easily?

Are they resistant to stains and discoloration, and to scratching by cutlery?

Will a saucer be damaged by a burning cigarette?

Will plates, cups, and saucers become deformed in boiling water?

Can all brands of plastic dishes be safely washed in automatic dishwashers?

An article on plastic dishes in the September issue of Consumer Bulletin answers these questions and others besides.

CONSUMER BULLETIN

WASHINGTON, NEW JERSEY

$7.70